

TARGETED INTERVENTION: PRACTICE and STRATEGIES
MATHEMATICS TUTORING

TIPS

Kindergarten



Utah State Office
of Education
250 East 500 South
P.O. Box 144200
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Larry K. Shumway, Ed.D.
State Superintendent of
Public Instruction



DRAFT

MATHEMATICS TUTORING TIPS

Targeted Intervention: Practice and Strategies

UTAH STATE OFFICE OF EDUCATION

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Kindergarten Math Tutoring TIPS

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Domain: Counting and Cardinality

Standard 1

Lesson 1-A

Count to 100 by ones and by tens. This lesson focuses on the numbers 1-10.

Lesson 1-B

Count to 100 by ones and by tens. This lesson focuses on numbers 11-20.

Lesson 1-C

Count to 100 by ones and by tens. This lesson focuses on counting by tens.

Standard 2

Lesson 2

Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

Standard 3

Lesson 3

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

Standard 4

Lesson 4-A

Understand the relationship between numbers and quantities; connect counting to cardinality.

- A. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

Lesson 4-B

- B. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

Lesson 4-C

- C. Understand that each successive number name refers to a quantity that is one larger.

Standard 5

Lesson 5

Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

Standard 6

Lesson 6

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

Standard 7

Lesson 7

Compare two numbers between 1 and 10 presented as written numerals.

Domain: Operations and Algebraic Thinking

Standard 1

Lesson 8

Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Standard 2

Lesson 9

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Standard 2-B

Lesson 10

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Standard 3**Lesson 11**

Decompose numbers less than or equal to 10 in pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

Standard 4**Lesson 12**

For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Standard 5**Lesson 13**

Fluently add and subtract within 5.

Domain: Number and Operations in Base Ten**Standard 1****Lesson 14**

Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Domain: Measurement and Data**Standard 1****Lesson 15**

Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

Standard 2**Lesson 16**

Directly compare two objects with a measurable attribute in common, to see which object has “more of” / “less of” the attribute, and describe the difference. For example directly compare the heights of two children and describe one child as taller/shorter.

Standard 3**Lesson 17**

Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Domain: Geometry**Standard 1****Lesson 18**

Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

Standard 2**Lesson 19**

Correctly name shapes regardless of their orientation or overall size.

Standard 3**Lesson 20**

Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

Standard 4**Lesson 21**

Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informational language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).

Standard 4 continued**Lesson 22**

Looking at shapes, corners/vertices and sides

Standard 5**Lesson 23**

Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

Standard 6**Lesson 24**

Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

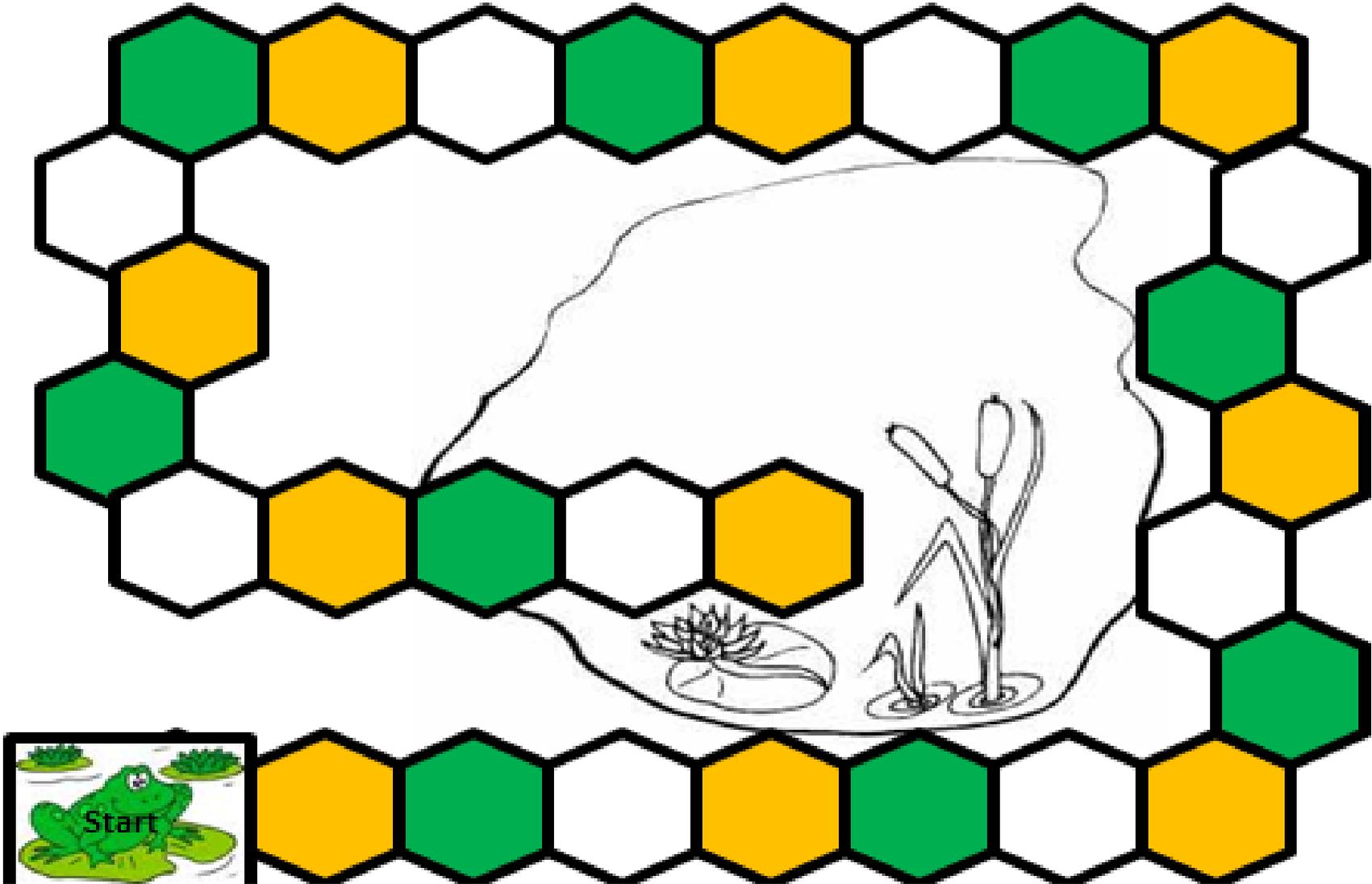


Mathematics Tutoring Session Template

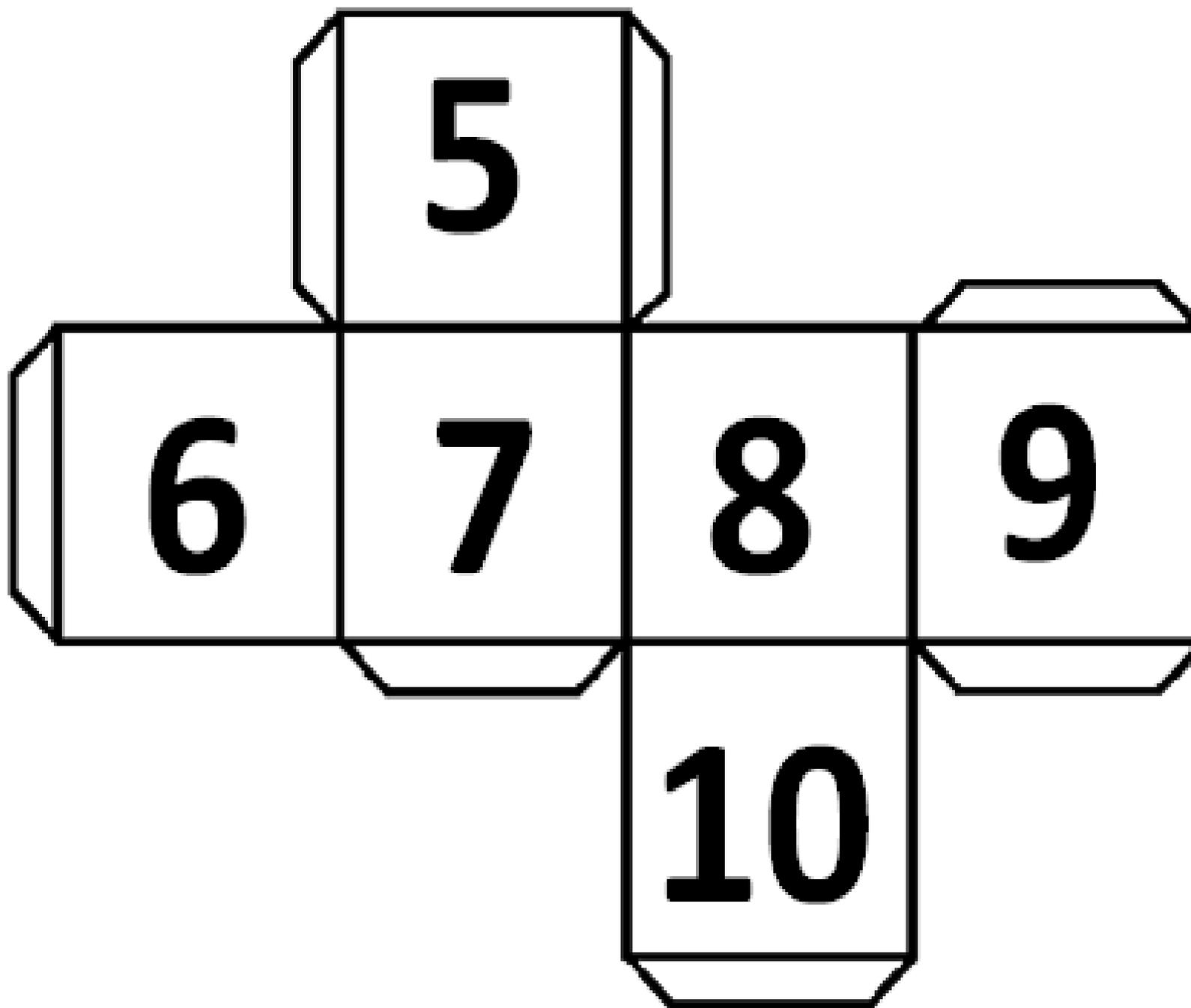
Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Know number names and the count sequence.
	Standard 1: Count to 100 by ones and by tens. (This lesson focuses on the numbers 1-10.)	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Notes and Materials	
2 Minutes	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> • This lesson focuses on the numbers 1-10, but be flexible about the numbers on which you focus. The focus should not be only on numbers with which the student is comfortable. Push his/her thinking. • Make the die prior to the lesson. • You will want to observe the following: <ul style="list-style-type: none"> - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully. - Does the student count each object once and only once? - Does the student keep track of what he/she counted? - Does the student check and recheck to make sure he/she counted correctly? - Does the student remember the number of objects he/she counted corresponds to the last number he/she said? 	
	Materials you will need: <ul style="list-style-type: none"> • Frog Hop Game board and die (K.CC.1A) • 3 paper bags with different amount of counters in each bag (5, 7, and 10) • Number Blocks 1-10 (K.CC.1A) 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention. Say, "We are going to look at some mystery bags to see if we can figure out how many objects are in each bag." Show the student the bags and have the student count the amount in each bag. If student needs help, assist with counting verbally and visually with the number blocks.	
8 Minutes	INSTRUCT—Provide Explicit, Interactive Instruction	
	3. State the objective. Say, "Today, we are going to practice counting from 1 to 10 by playing a game."	
	4. Provide explicit, step-by-step instructions. Model. <ul style="list-style-type: none"> • Place the Frog Hop Game Board (K.CC.1A) in front of the student. • Discuss where the start and finish are located. Explain the pathway that the student will take to win the game. • Place two game counters on the start: one for the tutor and one for the student. • Show the student how to roll the die and move his/her marker that many squares on the game board while counting out loud. • The tutor then rolls the die and moves his/her marker while counting out loud. • The game continues until someone reaches the last square. 	
	5. Check for understanding (work problem with student).	

	<ul style="list-style-type: none"> • The student should be able to recognize the number on the die and rote count accurately as the marker is placed on each square. • The student should not count the square his/her marker is sitting on, but begin counting when the marker is moved. • You will want to observe the following: <ul style="list-style-type: none"> - Does the child count each object once and only once? - Does he/she skip or double count objects? - Does the child keep track of what he/she counted? - Does the child check and recheck to make sure he/she counted correctly? - Does the child remember that the number of objects he/she counted corresponds to the last number he/she said?
5 Minutes	<p>GUIDED PRACTICE—Monitor Student Work</p> <p>7. Student works problems independently while tutor watches and coaches. Tutor and student play the game together, with the student moving his/her marker and counting correctly. Observe the student’s ability to count accurately. If the student is struggling, refer to the number blocks as a visual aid to help student understand. If the student is not counting correctly in sequence, have the student repeat the number after you in an echo format. Then repeat the count together.</p>
5 Minutes	<p>ASSESS—Evaluate Student Demonstration</p> <p>8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept/9. Student works a problem while explaining EVERY step orally. Say, “I am going to your marker somewhere on the game board and roll the die. Can you show me how far you would move your counter? Now, you put my counter somewhere on the game board and roll for me and show me how many spaces I need to move.” The student should move his/her marker the number of spaces that matches the number on the die.</p> <p>Look for the following things:</p> <ul style="list-style-type: none"> • Does the student count in sequence correctly with one-to-one correspondence? • Does the student skip or double count the objects? • Does the student miss a number in the counting sequence?

Hop to the Pond Game Board: K.CC.1A



Hop to the Pond Die: K.CC.1A



Number Blocks 1-10: K.CC.1A

1	2	3	4	5	6	7	8	9	10
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Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Know number names and the count sequence.
	Standard 1: Count to 100 by ones and by tens. (This lesson focuses on numbers 11-20.)	
	Key Academic Mathematics Vocabulary (3 or fewer)	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> • This lesson focuses on the numbers 1-10, but be flexible about the numbers on which you focus. The focus should not be only on numbers with which the student is comfortable. Push his/her thinking. • Create the die prior to the lesson. • You will want to observe the following: <ul style="list-style-type: none"> - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully. - Does the student count each object once and only once? - Does the student keep track of what he/she counted? - Does the student check and recheck to make sure he/she counted correctly? - Does the student remember the number of objects he/she counted corresponds to the last number he/she said? 	
8 Minutes	Materials you will need:	
	<ul style="list-style-type: none"> • Underwater Adventure Game board and die (K.CC.1B) • Counters • 3 “Mystery” paper bags with different amount of counters in each bag (15, 17, and 20) • Number Blocks 1-20 (K.CC.1B) 	
	LAUNCH—Assess and Provide Background Knowledge	
1. Connect to prior learning. Use a "hook" to gain the student's attention.		
<ul style="list-style-type: none"> • Say, “We are going to look at some mystery bags to see if we can figure out how many objects are in each bag.” • Show the student the bags and have the student count the amount in each bag. If student needs help, assist with counting verbally. 		
2. Introduce and review Key Academic Mathematic Vocabulary.		
<ul style="list-style-type: none"> • Place Number Blocks 1-20 (K.CC.1B) in front of the student. Say, “Let’s count on the number blocks together to 20.” • Count with the student pointing at each number as you say it with the student. • If the student is not counting correctly in sequence, have him/her repeat the number after you in an echo format. Then, repeat the count together. 		
INSTRUCT—Provide Explicit, Interactive Instruction		
3. State the objective.		
Say, “Today, we are going to practice counting from 1-20 by playing a game.”		
4. Provide explicit step-by-step instructions. Model.		
<ul style="list-style-type: none"> • Place the Underwater Adventure Game Board and Die (K.CC.1B) in front of the student. • Discuss where the start and finish are located. Explain the pathway that student will take to win the game. • Place two game counters on the start—one for the tutor and one for the student. • Show the student how to roll the die and move his/her marker that many squares on the game board while counting out loud. 		

- The tutor then rolls the die and moves his/her marker and counts out loud.
- The game continues until someone reaches the last square.

6. Check for understanding (work problem with student).

Observe student’s ability to count accurately. If student is struggling, refer to the number blocks as a visual aide to help student understand.

- You will want to observe the following:
 - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.
 - Does the student count each object once and only once?
 - Does the student keep track of what he/she counted?
 - Does the student check and recheck to make sure he/she counted correctly?
 - Does the student remember the number of objects he/she counted corresponds to the last number he/she said?

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Tutor and student play the game together with student moving his/her marker and counting correctly. Observe student’s ability to count accurately. If student is struggling, refer to the number blocks as a visual aid to help student understand.
- If the student is not counting correctly in sequence, have the student repeat the number after you in an echo format. Then repeat the count together.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

Ask the student to count to 20 on the number blocks. Observe student and verbally assist when needed. Have the student create three different mystery bags: 11, 18, and 19.

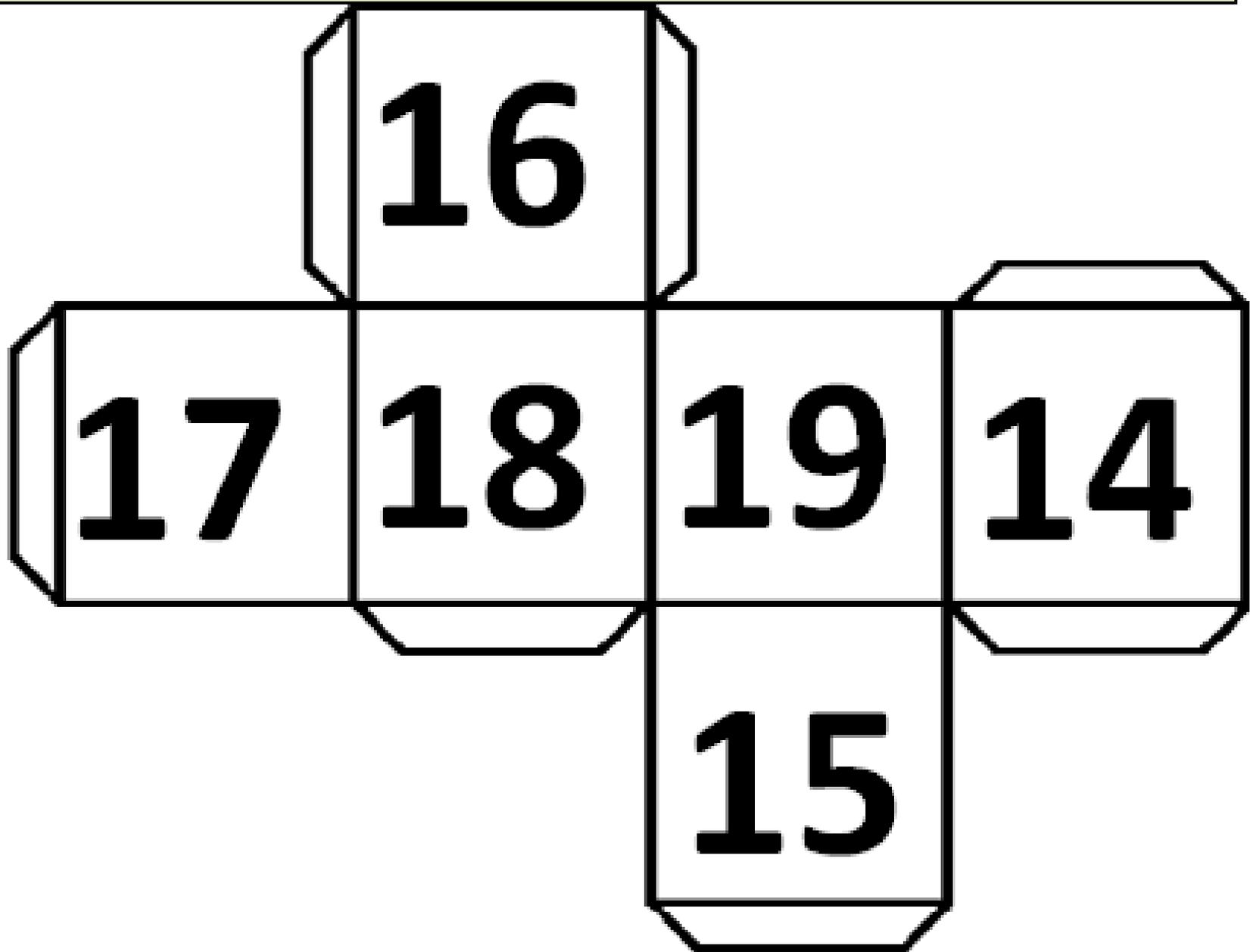
These are the three important ideas to look out for:

- Does the student count in sequence correctly with, one-to-one correspondence?
- Does the student skip or double count the objects?
- Does the student miss a number in the counting sequence?

5 Minutes

5 Minutes

Underwater Adventure Die: K.CC.1B



Number Blocks 1-20: K.CC.1B

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Know number names and the count sequence.
	Standard 1: Count to 100 by ones and by tens. (This lesson focuses on counting by tens.)	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Ten: a group of 10 ones.	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> • This lesson focuses on the counting by tens, but be flexible about the numbers on which you focus. The focus should not be only on numbers with which the student is comfortable. Push his/her thinking. * • You will want to observe the following: <ul style="list-style-type: none"> - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully. - Does the student count each object once and only once? - Does the student keep track of what he/she counted? - Does the student check and recheck to make sure he/she counted correctly? - Does the student remember the number of objects he/she counted corresponds to the last number he/she said? 	
8 Minutes	Materials you will need:	
	<ul style="list-style-type: none"> • “Eensy Weensy Spider” game board die (K.CC.1C) • Approximately 60 interlocking cubes • 120 Chart (K.CC.1C) • Crayon 	
	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> • Say, “I wonder how many cubes are in this pile?” (Show about 50 cubes.) “Let’s find out by putting them into groups of ten.” 	
8 Minutes	2. Introduce and review Key Academic Mathematics Vocabulary.	
	<ul style="list-style-type: none"> • Say, “When we put ten ones together it makes a ten. Let’s make a ten together.” • Make a ten with the student. Then have the student make a ten. 	
	INSTRUCT—Provide Explicit, Interactive Instruction	
	3. State the objective.	
	Say, “Today, we are going to practice counting by tens by playing a game.”	
8 Minutes	4. Provide explicit step-by-step instructions.	
	Say, “First, we need to practice counting by tens. Let’s look closely at the 120 chart. Let’s color the tens to help us count by tens again.” Color 10, 20, 30, and so forth.	
	<ul style="list-style-type: none"> • Say, “Let’s count together by tens using our 120 chart K.CC.1C.” Count with the student while pointing at each ten. If the student is not counting correctly in sequence, have the student repeat the number after you in an echo format. Then repeat the count together. 	
8 Minutes	5. Model.	
	<ul style="list-style-type: none"> • Place the “Eensy Weensy Spider” game board (K.CC.1C) in front of the student. • Discuss where the start and finish are located. Explain the pathway the student will take to win the game. • Place two game counters on the start—one for the tutor and one for the student. • Show the student how to roll the die and move his/her marker that many squares on the game board 	

while counting out loud.

- The tutor then rolls the die and moves his/her marker and counts out loud.
- The game continues until someone reaches the last square.

6. Check for understanding (work problem with student).

- The student should be able to recognize the number on the die and rote count accurately as the marker is placed on the squares.
- You will want to observe the following:
 - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.
 - Does the student count each object once and only once?
 - Does the student keep track of what he/she counted?
 - Does the student check and recheck to make sure he/she counted correctly?
 - Does the student remember the number of objects he/she counted corresponds to the last number he/she said?
 - The student should not count the square his/her marker is sitting on, but begin counting when the marker is moved.
- Observe the student's ability to count accurately. If the student is struggling, refer to the 120 chart as a visual aid to help him/her understand.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Tutor and student play the game together, with the student moving his/her marker and counting correctly. Observe the student's ability to count accurately. If student is struggling, refer to the number line as a visual aid to help the student understand.
- If the student is not counting correctly by tens, have the student repeat the number after you in an echo format. Then repeat the count together.

ASSESS—Evaluate Student Demonstration

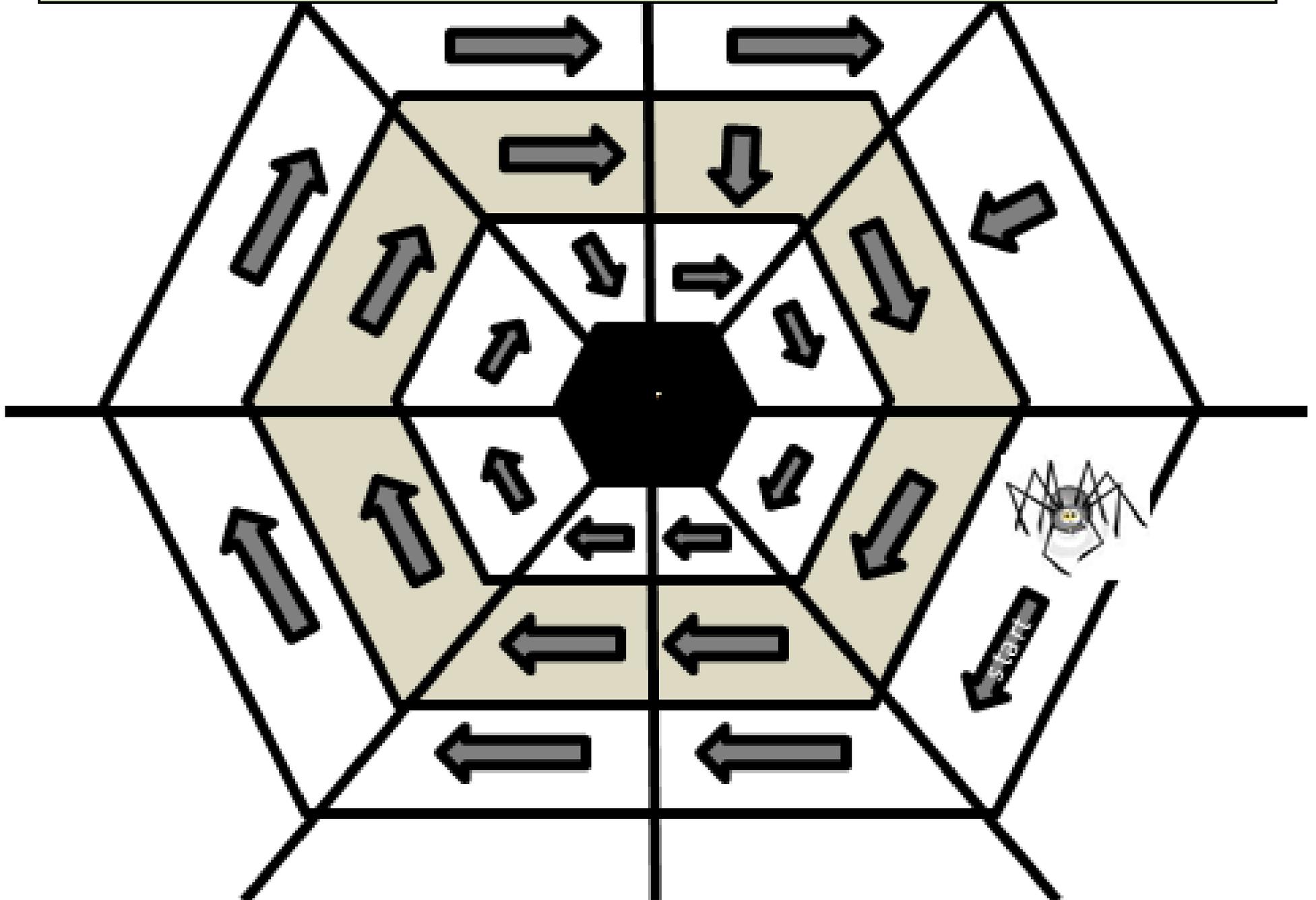
8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.

Ask the student to make a ten using cubes. Then ask the student to count by tens using the 120 chart. Assist where needed to help the student be successful.

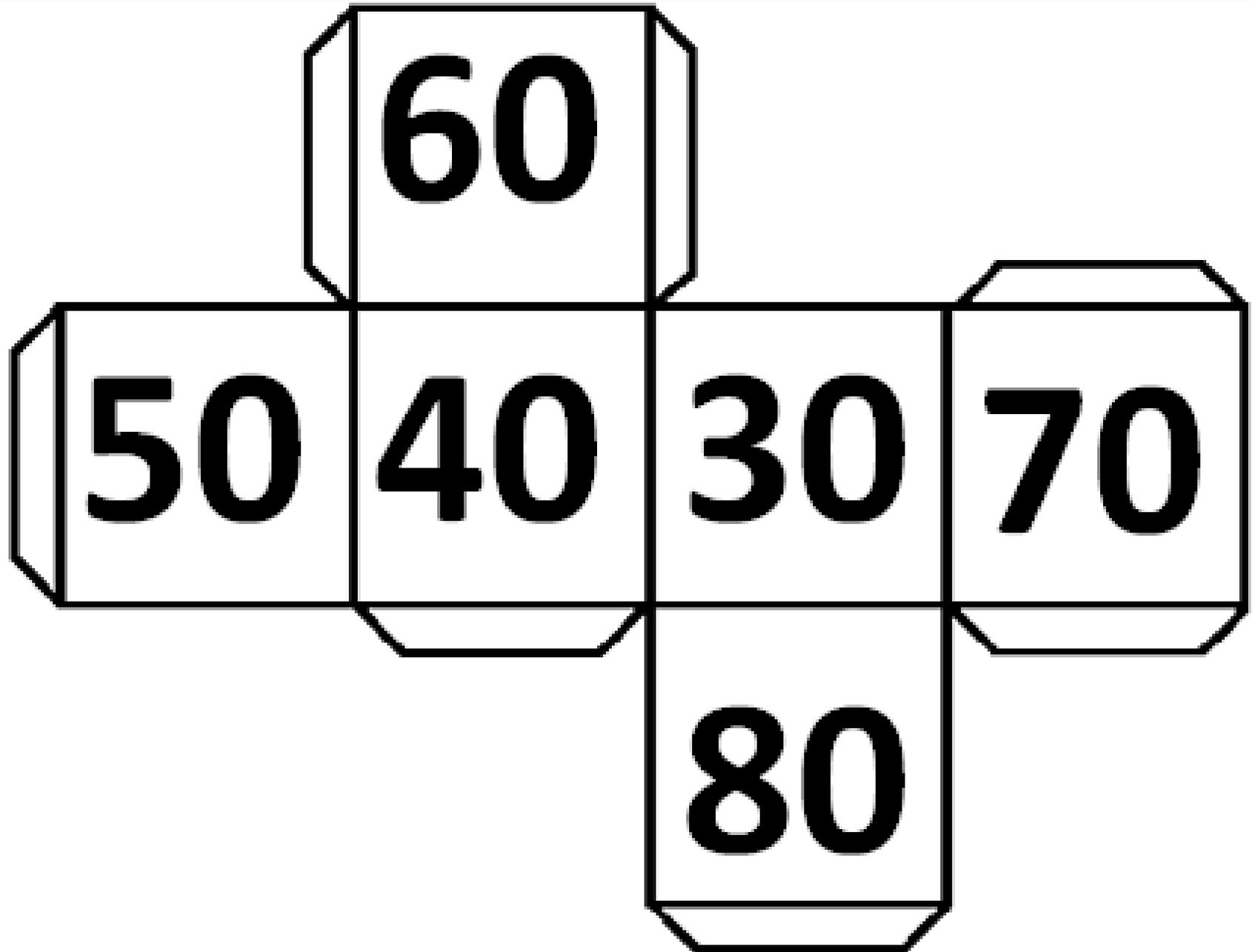
5 Minutes

5 Minutes

The Eensy Weensy Spider Game Board: K.CC.1C



The Eensy Weensy Spider Game Board: K.CC.1C



Number Chart 1-120: K.CC.1C

1	11	21	31	41	51	61	71	81	91	101	111
2	12	22	32	42	52	62	72	82	92	102	112
3	13	23	33	43	53	63	73	83	93	103	113
4	14	24	34	44	54	64	74	84	94	104	114
5	15	25	35	45	55	65	75	85	95	105	115
6	16	26	36	46	56	66	76	86	96	106	116
7	17	27	37	47	57	67	77	87	97	107	117
8	18	28	38	48	58	68	78	88	98	108	118
9	19	29	39	49	59	69	79	89	99	109	119
10	20	30	40	50	60	70	80	90	100	110	120



Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Know number names and the count sequence.
	Standard 2: Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	
	Key Academic Mathematics Vocabulary (3 or fewer)	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson: Utilize the Number Line to 20 to help student visually see the pattern of numbers.	
	Materials you will need:	
	<ul style="list-style-type: none"> • Number Blocks 1 to 20 (K.CC.2) • Spinner (K.CC.2) • "What Is One More?" game board (K.CC.2) • Four in a Row Game Board (K.CC.2) • Two dice • 20 counters 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention. <ul style="list-style-type: none"> • Say, "We are going to play a game today. Look the game board. We are going to try to cover the entire game board with counters. This is how we play the game. You roll the die and then cover the number that is one more. For example, if I roll a 5 I do not cover 5. I cover 6." • Use the number blocks if the student struggles with knowing what the next number is. 	
	2. Introduce and review Key Academic Mathematics Vocabulary.	
5 Minutes	INSTRUCT—Provide Explicit, Interactive Instruction	
	3. State the objective. Say, "We are going to play a game to practice starting to count at a different number than just one. For example, listen and watch me. Look I am pointing at 3 on the number blocks: 3, 4, 5, 6, 7, 8, 9, 10."	
	4. Provide explicit, step-by-step instructions.	
	<ul style="list-style-type: none"> • Say, "We are going to do three different activities. First we are going to use the spinner." (Use a paperclip and a pencil to make the spinner.) "Spin the spinner and start counting on from the number you landed on. For example, if you spun a 3 you would say 3, 4, 5, 6, 7, 8, 9, 10..." • Have the student spin the spinner 10 times and count on after every spin to 20. • Use the number blocks to assist the student with counting on. 	
	5. Model	
	<ul style="list-style-type: none"> • Say, "Now, we will roll two dice and count on from the number rolled." • Roll the dice have the student figure out how many he/she has, and then have him/her count on to 20. • Have the student roll the dice 10 times and count on to 20 after every roll. 	
6. Check for understanding (work problem with student). Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.		
GUIDED PRACTICE—Monitor Student Work		
7. Student works problems independently while tutor watches and coaches. Say, "Now, we are going to see if you can get four in a row by counting on from that number. Look at the		

chart. Which row would you like to try for four in a row on?" The student chooses a number and counts on from that number using the number blocks if needed. Continue until the student gets four in a row. If the student does it quickly, challenge him/her to get two four in a rows.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Ask the student to count on from 3, 7, 11, and 15. Use the number blocks to assist with correct counting.
- Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.

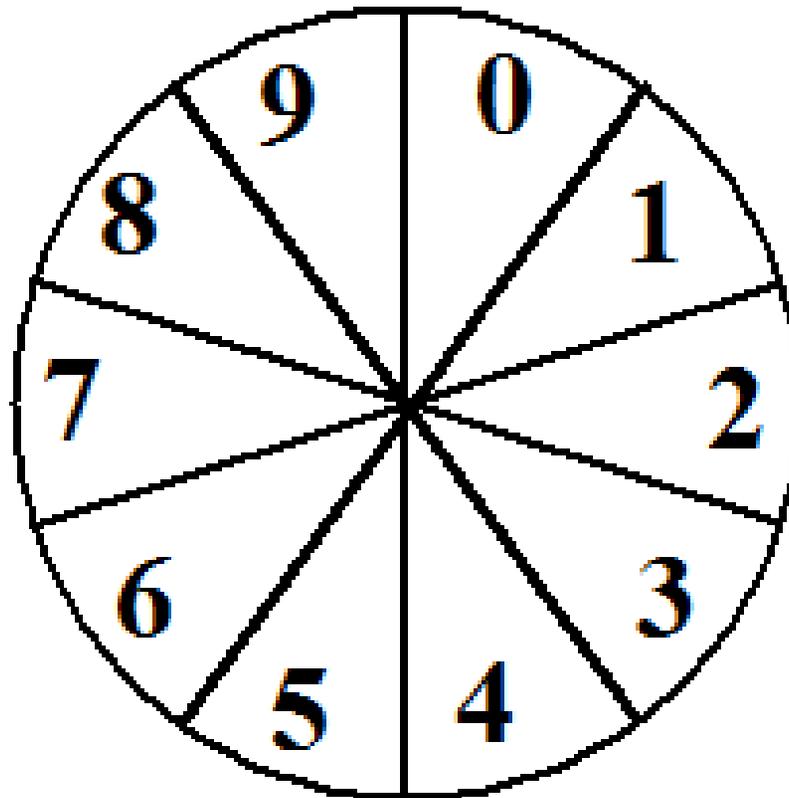
Number Blocks 1-20: K.CC.2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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What is One More?K.CC.2

2	5	6	7
3	4	7	6
5	4	3	2
3	5	4	5

Spinner K.CC.2



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Four in a Row K.CC.2

9	5	16	7
8	13	17	6
2	4	3	18
10	11	12	5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Know number names and the count sequence.
	Standard 3: Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Notes and Materials	
2 Minutes	Notes and suggestions for an effective lesson: Cut out the Number Card and Number Picture Match (3 pages) prior to the lesson.	
	Materials you will need:	
	<ul style="list-style-type: none"> • Build My Neighborhood (K.CC.3) • Matching Number Cards (K.CC.3) • Number Card and Number Picture Match (K.CC.3) • Number Writing Reference Guide (K.CC.3) • Challenge #1 (K.CC.3) • 60 interlocking cubes 	
	LAUNCH—Assess and Provide Background Knowledge	
	<p>1. Connect to prior learning. Use a "hook" to gain the student's attention. Say, "Today, we are going to play a matching game. I want you to match the number card with the correct number picture. For example, let's look at the turtles. Let's count them, 1, 2. There are two turtles. I am going to match it with the number 2. Continue matching the numbers 0-10.</p>	
8 Minutes	2. Introduce and review Key Academic Mathematics Vocabulary.	
	INSTRUCT—Provide Explicit, Interactive Instruction	
	3. State the objective. Say, "Today we will practice writing and building the numbers from 0-20."	
	4. Provide explicit, step-by-step instructions. Say, "We are going to build a neighborhood today and write numbers. There are three challenges in the neighborhood. Look at the three different stop signs. We are going to start at the five house. Build a house that is 5 cubes high and place it on the house." (Student builds the 5 story house.) "There is a stop sign, so we must complete the challenge before we continue on. Challenge number one write numbers from one to ten. Have the student complete Challenge #1. Refer to the Number Reference chart as needed.	
	GUIDED PRACTICE—Monitor Student Work	
5 Minutes	<p>5. Student works problems independently while tutor watches and coaches.</p> <ul style="list-style-type: none"> • Say, "Now we have to build an eight-story house, then a seven-story house." Have the student build the three-, four-, and ten-story houses. Then stop to complete the second challenge. • The second challenge is, "Can you figure out the missing numbers in my puzzle?" Have the student write in the missing numbers. • Now have the student build the one-, six-, two-, and 20-story houses. Then complete the last challenge. The last challenge is to write all the numbers from 1 to 20. 	

ASSESS—Evaluate Student Demonstration

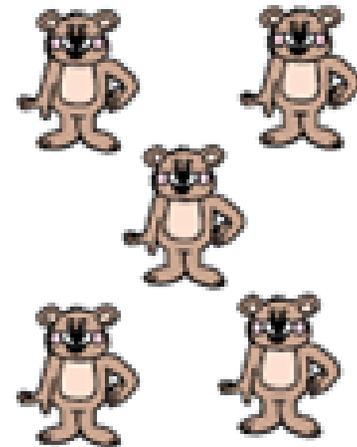
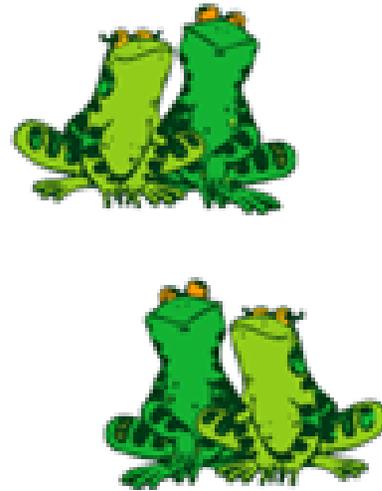
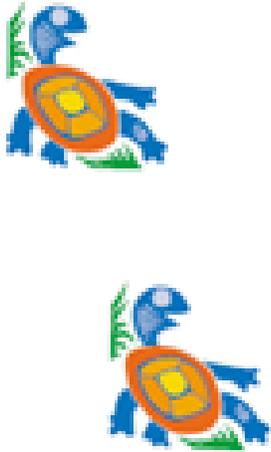
6-9. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. Student works a problem while explaining EVERY step orally.

- Now have the student build the one-, six-, two-, and 20-story houses. Then complete the last challenge. The last challenge is to write all the numbers from 1 to 20.

Number Card and Number Picture Match K.CC.3

4	5	6	7
0	1	2	3

Number Card and Number Picture Match K.CC.3



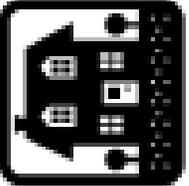
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9

10



Build My Neighborhood K.CC.3

 5 	 8 →	 7 →	 3 →	 4 ↓
  20	 ← 2	 ← 6	 ← 1	  10

Challenge #1 K.CC.3

1

2

3

4

5

6

7

8

9

10

Challenge #2 K.CC.3

1	2		4	
	7			10
	12		14	
		18		

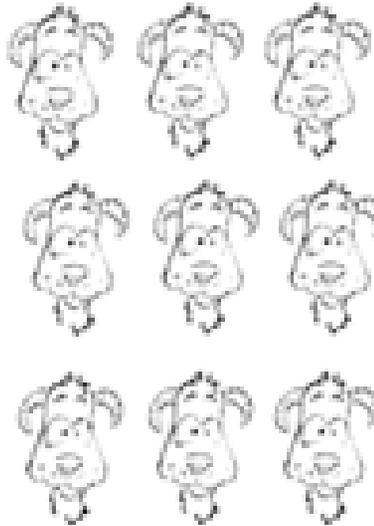
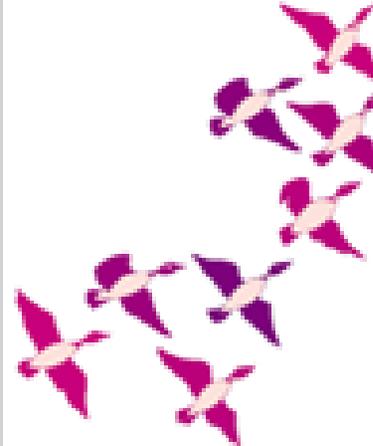
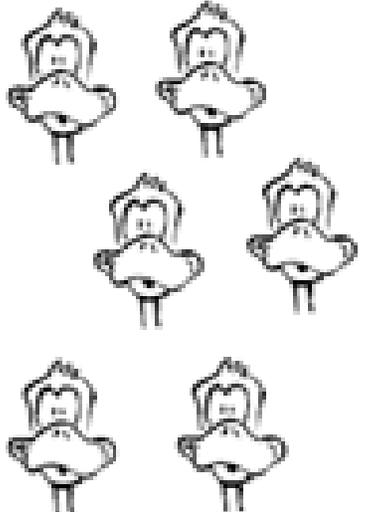
Challenge #1 K.CC.3

1				

Number Writing Reference Guide K.CC.3

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

Number Card and Number Picture Match K.CC.3



Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Count to tell the number of objects.
	Standard 4: Understand the relationship between numbers and quantities; connect counting to cardinality.	
	a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> • This lesson focuses on counting to ten. • Be flexible with the numbers that you focus on with students. The focus should not just be numbers he/she are comfortable; push the student’s thinking. • Cut out Number Cards K.CC.4 • Cut out Match-Up Ten Frames to Numbers Cards K.CC.4 • You will want to observe the following: <ul style="list-style-type: none"> - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully. - Does the student count each object once and only once? - Does the student keep track of what he/she counted? - Does the student check and recheck to make sure he/she counted correctly? - Does the student remember the number of objects he/she counted corresponds to the last number he/she said? • When you can answer “Yes” for the numbers 1-10, have the student use two ten-frames and move to the numbers 1-20. 	
	Materials you will need:	
Ten Frames Bunk Bed K.CC.4 (one or two)		
Approximately 25 Counters		
Number Cards K.CC.4		
Match-Up Ten Frames K.CC.4		
2 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> • Say, “Have you ever seen a bunk bed before?” (Show the picture.) “A bunk bed is two beds stacked on top of each other. People use them when they have a bedroom that two people need to sleep in.” • Show the student a ten-frame. Say, “Have you ever used this math tool called a ten-frame in class before? Tell me about it. We are going to pretend the bunk bed is like a ten-frame. Children are playing together, and five can fit on the top and five can fit on the bottom. It will be easier to count the number of children if we put five on the top before we put any on the bottom.” 	
8 Minutes	2. Introduce and review Key Academic Mathematics Vocabulary.	
	INSTRUCT—Provide Explicit, Interactive Instruction	
	3. State the objective.	
Say, “Today, we are going to practice making different numbers. I am going to choose a number and you will use your ten-frame to show me the number with counters.		
4. Provide explicit step-by-step instructions./5. Model.		
<ul style="list-style-type: none"> • Draw a number—for example, four. The child counts out that many objects while placing them on the ten-frame. • Ask, “How many do you have?” The student should say, “Four.” 		

- Choose out a different number. “Show me seven.” Ask, “How many do you have?”
- Repeat using the remainder of the cards from 1 to 10.

6. Check for understanding (work problem with student).

- You will want to observe the following:
 - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.
 - Does the student count each object once and only once?
 - Does the student keep track of what he/she counted?
 - Does the student check and recheck to make sure he/she counted correctly?
 - Does the student remember the number of objects he/she counted corresponds to the last number he/she said?
- When you can answer “Yes” for the numbers 1-10, have the student use two ten-frames and use numbers 1-20.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

Randomly lay out the Number Cards K.CC.4 on the table and the Match-Up Ten Frames to Numbers Cards K.CC.4. Say, “Please match the Ten Frames and Number Cards Together.”
Observe and assist the student where needed in making matches for numbers one to ten.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Choose out a number card and have the student show that number on the ten-frame. Repeat two more times.

5 Minutes

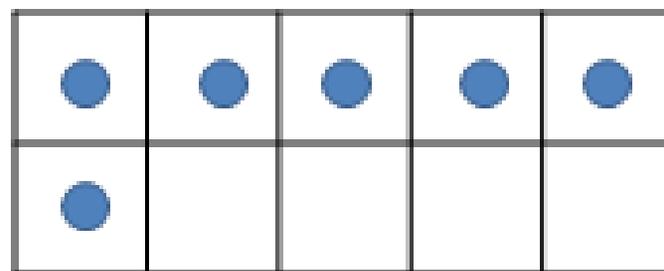
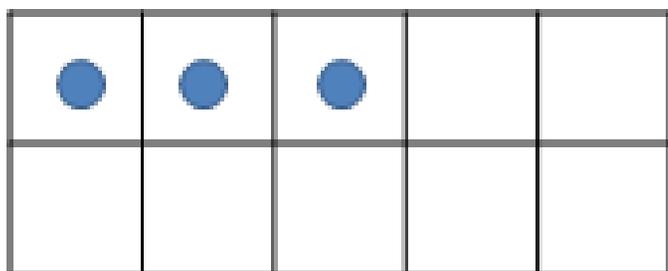
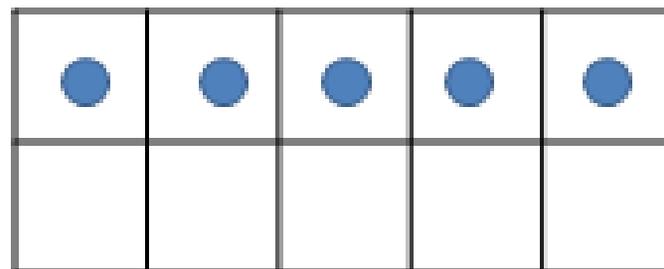
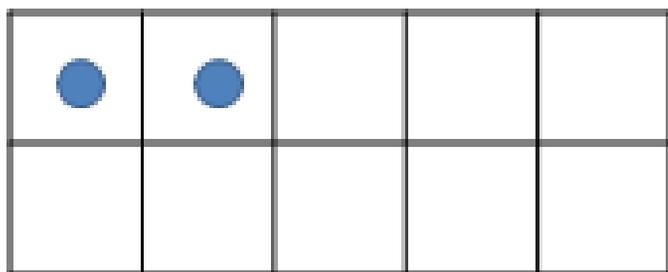
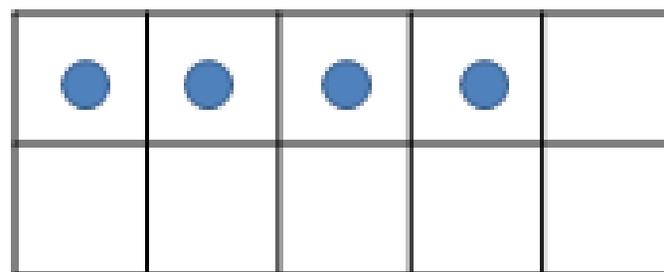
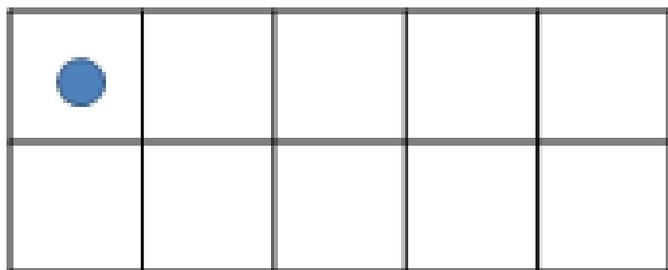
5 Minutes

Ten Frames Bunk Bed K.CC.4A

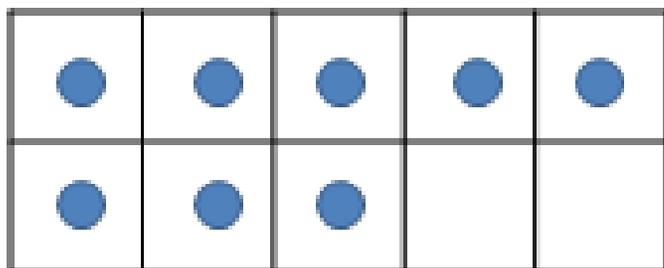
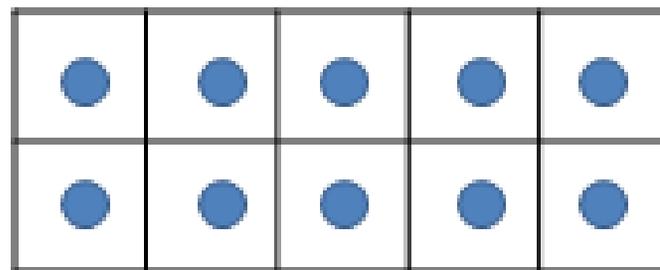
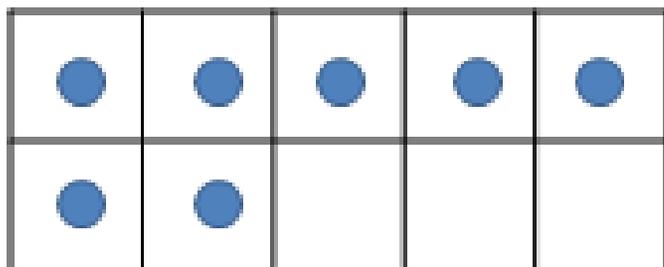
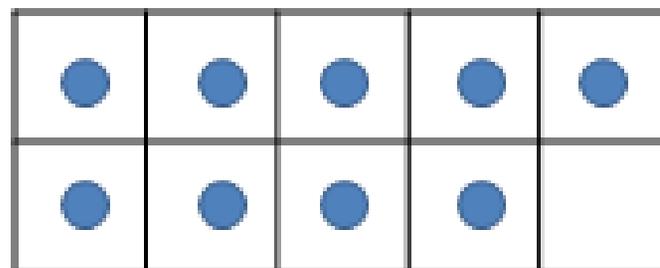
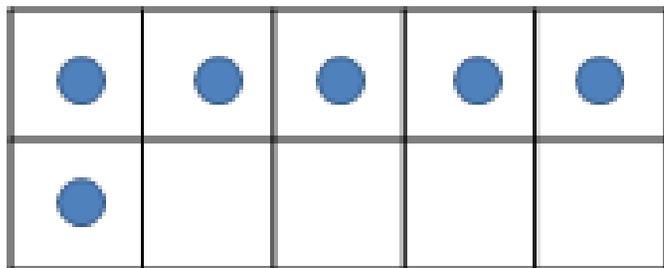


bunk bed

Match-Up Ten Frames K.CC.4A



Match-Up Ten Frames K.CC.4A





Mathematics Tutoring Session Template

Before You Begin

Common Core Identification

Domain: Counting and Cardinality

Cluster: Count to tell the number of objects.

Standard 4: Understand the relationship between numbers and quantities; connect counting to cardinality.
b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

Key Academic Mathematics Vocabulary (3 or fewer)

Notes and Materials

Notes and suggestions for an effective lesson:

- Make sure the student replaces cubes into the bag before getting more cubes.

Materials you will need:

- Paper bag
Approximately 20 Interlocking cubes or other objects to count

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Show the student the paper bag.
Say, "I have something in my bag that we are going to count. Stick your hand in the bag. What do you think it is?" Have the student describe the object.

2. Introduce and review Key Academic Mathematics Vocabulary.

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

Say, "We are going to play a counting game together."

4. Provide explicit step-by-step instructions/5. Model.

- Say, "Today we are going to play a game called 'grab bag.' I am going to reach inside the bag without looking and grab a handful of cubes. I will place them on the table and count them. After I have counted them, I will say, 'I have ___ cubes.'"
Grab some counters.
Organize counters into a line.
Count the counters. Touch each one as you say the number name. "One, two, three, four, five..."
Ask, "How many?"
Say the number, the last number in the counting sequence for that set of objects (5). Frame a sentence for the student such as, "I have five cubes." This should be said, again, after the count sequence is finished.
Cubes are returned to the bag.
Play continues with tutor and student taking turns.

5/6. Model/ Check for understanding (work problem with student).

2 Minutes

8 Minutes

5 Minutes

- Check that the student is saying the counting sequence correctly.
- If you ask, “How many?”, and the student starts the count again instead of saying the number, do not allow the student to count again.
- Cover the set and ask, “How many?”
- Ask the student to put his/her hands on table or behind his/her back so that he/she cannot use them to count, and ask, “How many?”
- If needed, ask, “What was the last number you said?” Student replies. Say, “Yes, there are five cubes on the table.”

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Watch as the student performs the activity, making sure the student counts the cubes and correctly and gives the total amount.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Give the student a handful of cubes. Have the student count out loud and observe that the student tracks correctly.
- Make sure that the student says the correct total number of cubes without counting again.

5 Minutes



Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Count to tell the number of objects.
	Standard 4: Understand the relationship between numbers and quantities; connect counting to cardinality. c. Understand that each successive number name refers to a quantity that is one larger.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
2 Minutes	One more: adding one to the previous amount.	
	Notes and Materials	
	Notes and suggestions for an effective lesson: As you tell the story, make sure that “one more” is said when adding a counter.	
	Materials you will need:	
8 Minutes	<ul style="list-style-type: none"> • Song: “One Elephant Went Out to Play” (K.CC.4) • Elephant Jungle Work Mat (K.CC.4) • 10 counters • Number Blocks (K.CC.4) 	
	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> • Sing or say the song/finger play, “One Elephant Went Out to Play” (K.CC.4). This is a repetitive song. Have the student join in. 	
2. Introduce and review Key Academic Mathematics Vocabulary.		
<ul style="list-style-type: none"> • Places three counters on the table. Say, “Place one more counter on the table.” (Student places another counter on the table.) Say, “There were three counters on the table and you added one more. Now how many counters are on the table?” (Students should respond “Four.”) • Repeat with the number four. 		
INSTRUCT—Provide Explicit, Interactive Instruction		
3. State the objective.		
Say, “Today, we are going to practice adding one more.”		
4. Provide explicit, step-by-step instructions.		
<ul style="list-style-type: none"> • Place the Elephant Jungle Work Mat (K.CC.4) in front of the student. Tell the student the following story: • “One elephant went out to play in the jungle.” Color one box on the Number Blocks 1-10 (K.CC.4). • Direct the student to place one counter on his/her work mat. “If one more came to join him, how many would be in the jungle?” Direct the student to place another counter on the work mat and say, “Two is one more than one.” Color one more box on the Number Blocks 1-10 (K.CC.4). Say again, “Two is one more than one.” • Say, “Now there are two elephants playing in the jungle. If one more came to join them, how many would be in the jungle?” Direct the student to place another counter on the work mat and say, “Three is one more than two.” Color one more box on the Number Blocks 1-10 (K.CC.4). Say again, “Three is one more than two.” • Be sure to use the “ ___ is one more than ___ (previous number)” sentence frame. • Continue the story adding one more elephant until the student reaches ten. 		
5. Model.		
<ul style="list-style-type: none"> • Reference the Number Blocks 1-10. Color each box to represent the number of elephants, so that the 		

student can clearly see what is one more.

- For example, there are four elephants. How many is one more? (Five.)

1	2	3	4	5	6	7	8	9	10
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6. Check for understanding (work problem with student).

Ask the student, “Look at the number line. Tell more what is one more than four? Ask about different numbers to nine.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Direct student to independently place the counters on the work mat as the tutor tells the story.
- Be sure to use the sentence frame “___ is one more than ___ (previous number).”

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.

- Place five counters on the mat and tell the student, “Place one more counter (elephant) on the mat.”
- Ask, “How many elephants are on the mat now?” (Six.) “Can you tell me more?” (Six is one more than five.)

9. Student works a problem while explaining EVERY step orally.

- Tell the story beginning with the student placing six counters (elephants) on his/her mat.
- Continue the story by asking the student, “If one more came to join them, how many would be in the jungle?” The student should place another counter on the board and respond, “___ is one more than ___ (previous number).”

5 Minutes

5 Minutes

One Elephant Went Out to Play

One elephant went out to play on a bright and sunny day
He had such enormous fun that he called another elephant friend to
come.

Two elephants went out to play on a bright and sunny day.
They had such enormous fun that they called another elephant friend
to come.

Three elephants went out to play on a bright and sunny day.
They had such enormous fun that they called another elephant friend
to come.

Four elephants went out to play on a bright and sunny day.
They had such enormous fun that they called another elephant friend
to come.

And so on to ten...

Elephant Jungle Work Mat: K.CC.4



Number Blocks 1-10: K.CC.4

1	2	3	4	5	6	7	8	9	10
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1	2	3	4	5	6	7	8	9	10
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Mathematics Tutoring Session Template

Before You Begin

2 Minutes

8 Minutes

Common Core Identification

Domain: Counting and Cardinality

Cluster: Count to tell the number of objects.

Standard 5: Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Key Academic Mathematics Vocabulary (3 or fewer)

Notes and Materials

Notes and suggestions for an effective lesson:

- It is important for the student to count orally as the objects are counted.
- Cut out the Money Bags (K.CC.5) (2 pages) and Dot Cards (K.CC.5) (3 pages) prior to the lesson. Put them in different bags.
- You will want to observe the following:
 - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.
 - Does the student count each object once and only once?
 - Does the student keep track of what he/she counted?
 - Does the student check and recheck to make sure he/she counted correctly?
 - Does the student remember the number of objects he/she counted corresponds to the last number he/she said?

Materials you will need:

- Dot Cards (K.CC.5)
- Money Bags (K.CC.5)
- 20 counters

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Say, "I have eight friends, and they are saving money to buy a present for another friend. Somehow, all the money bags got mixed up. Can you match the money with the right friend?"
- You will want to observe the following:
 - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.
 - Does the student count each object once and only once?
 - Does the student keep track of what he/she counted?
 - Does the student check and recheck to make sure he/she counted correctly?
 - Does the student remember the number of objects he/she counted corresponds to the last number he/she said?

2. Introduce and review Key Academic Mathematics Vocabulary.

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

Say, "Today will are going to count objects in different designs to find out how many there are."

4. Provide explicit step-by-step instructions.

- Put out five counters in a line. Count the objects aloud. Say, "I have five counters." Now move the same five counters into a pile. Ask, "How many do I have?" (Five.) Count to check the answer. Spread out the same five objects into a circle. Ask, "How many do I have?" (Five.) Count to check the answer.
- Say, "Look, five can look different, but it is still just five counters."
- Repeat the same activity with six objects.

5. Model.

We are going to play a game where I have put dots in crazy and different designs with and without ten frames. I want to sort them by number. So, I want all the five cards together and 6 cards and so on.

Have the student start sorting the cards and matching them with the correct number.

- You will want to observe the following:
 - Does the student rote count in order correctly? It common for students to skip one number. Listen carefully.
 - Does the student count each object once and only once?
 - Does the student keep track of what he/she counted?
 - Does the student check and recheck to make sure he/she counted correctly?
 - Does the student remember the number of objects he/she counted corresponds to the last number he/she said?

6. Check for understanding (work problem with student).

- Ask, "Can a four look different? Why?"

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Assist student with sorting the cards by the correct number.

ASSESS—Evaluate Student Demonstration

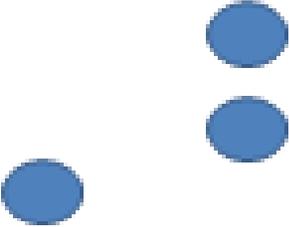
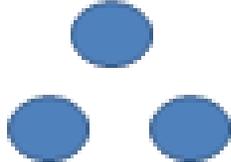
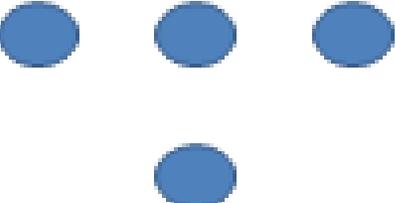
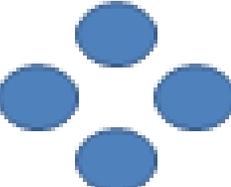
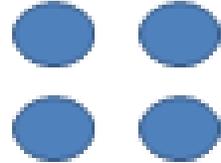
8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Pick up the pile of seven cards. Ask the student, how many are there? (Seven.) Go to the next card. (Seven.) Ask, "How can these both be seven?" Continue with the rest of the cards. The student should understand seven can look different and still be seven.

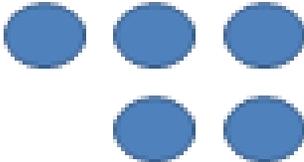
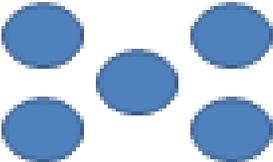
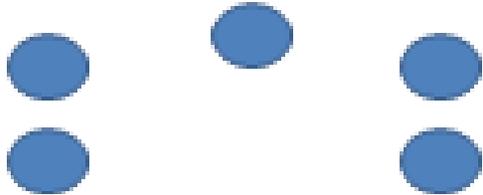
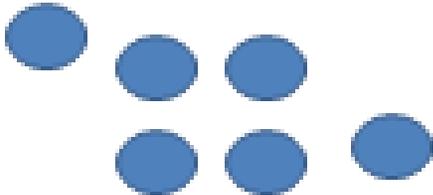
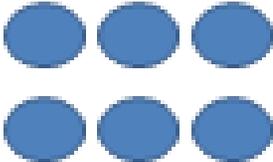
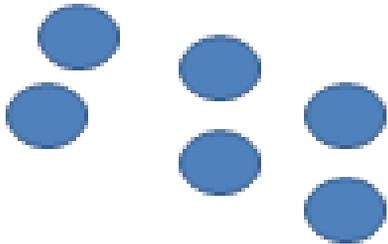
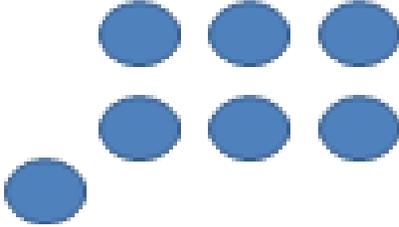
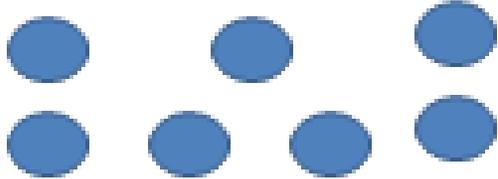
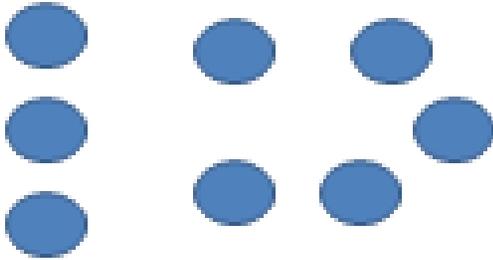
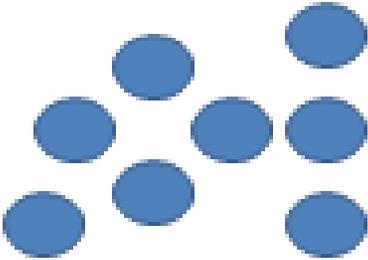
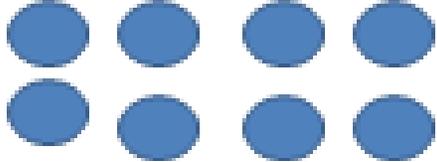
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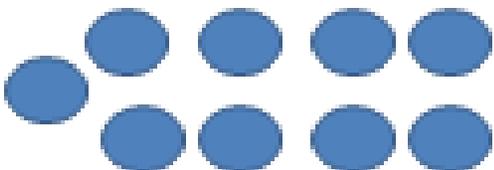
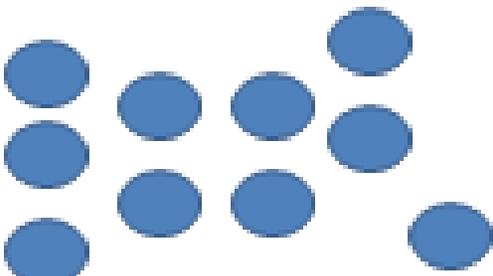
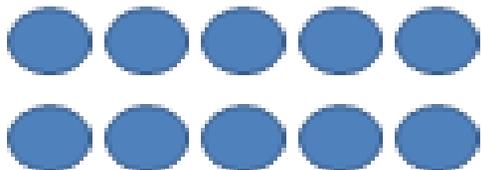
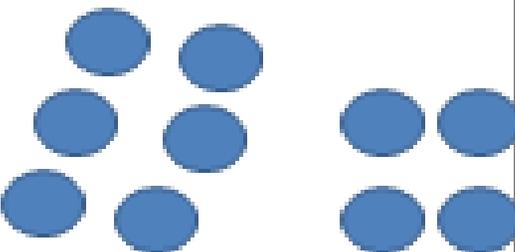
Dot Cards K.CC.5

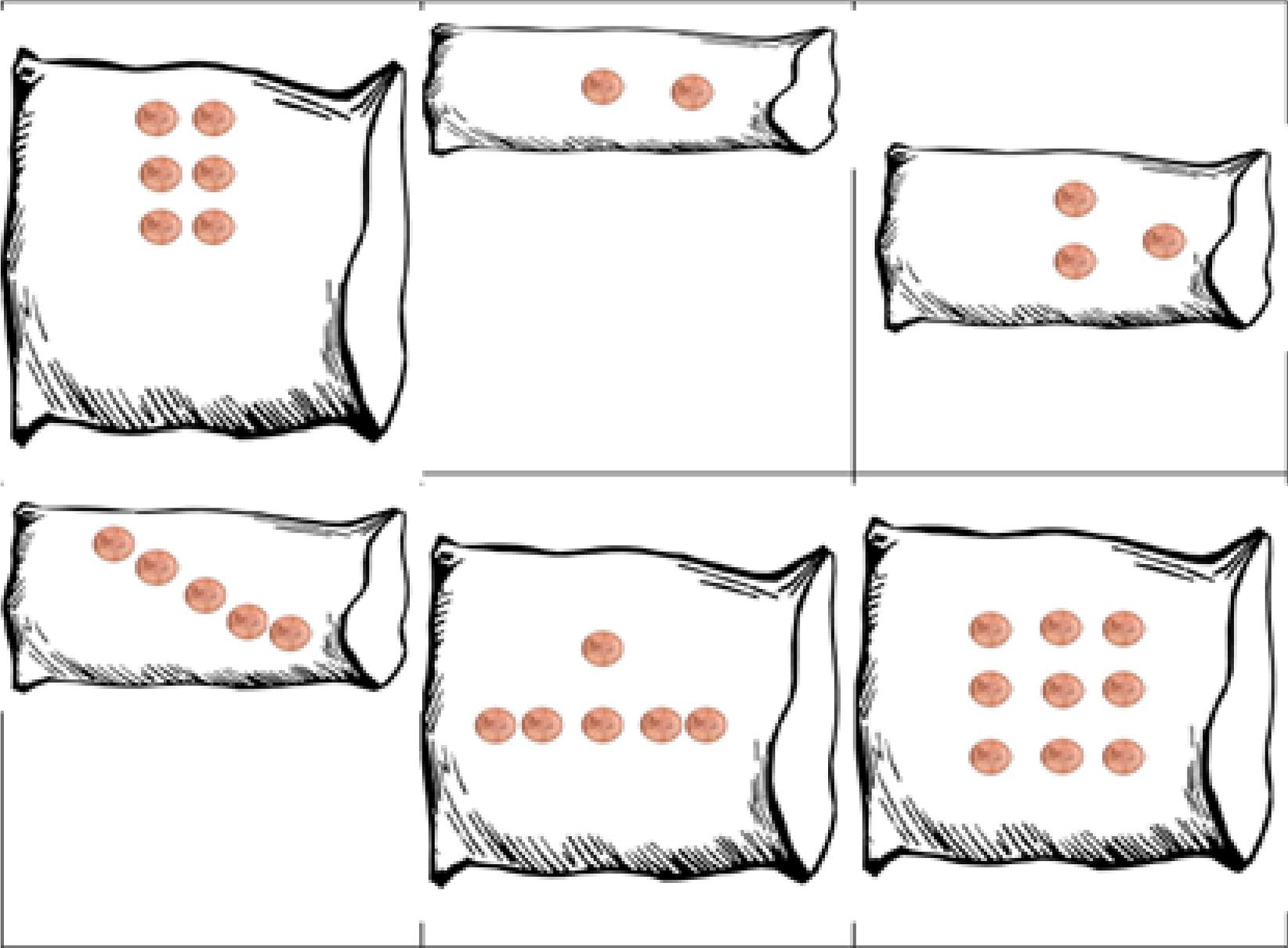
Dot Cards K.CC.5

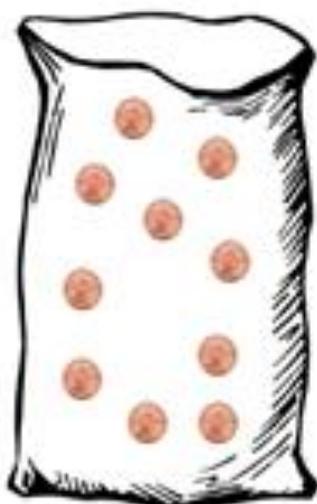
Dot Cards K.CC.5

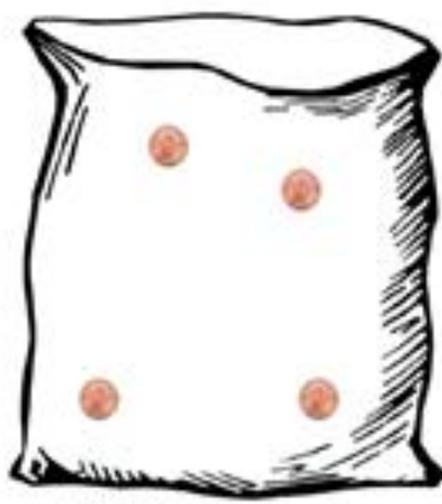
Money Bags: K.CC.5



Money Bags: K.CC.5



JOE 3 cents



MARIA 9 cents



TED 2 cents



LUCY 6 cents



TONY 6 cents



CARRIE 5 cents



JAMES 10 cents



EDITH 4 cents





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Compare numbers.
	Standard 6: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Greater than: a relationship between two amounts where one is larger than the other. Less than: a relationship between two amounts where one is smaller than the other. Equal to: a relationship between two amounts where they are both the same.	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> Most young children understand the concept of more. Do NOT assume that because the student knows which set has more, he/she also knows which set has fewer. Cut out Dot Cards (K.CC.8) prior to lesson. Organize the cards into two groups: 0-5 and 6-10. Begin with the numbers 0-5 and then increase the amount to 10. 	
	Materials you will need:	
	<ul style="list-style-type: none"> Dot Cards (K.CC.6) Counters 20 interlocking cubes More/Fewer/Same Spinner (K.CC.6) Paperclip for spinner Key Academic Mathematics Vocabulary Cards (K.CC.6) (There are two different cards.) Number Line (K.CC.6) Ten Frame (K.CC.6) Hungry Alligator (K.CC.6) 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> Say, "We are going to play a game together. Each person begins the game with ten interlocking cubes. The winner of the game is the person who ends up with all the cubes." Have the student count ten cubes for each person. This is a great way to assess the student's ability to count, so that you will know whether to start with just zero to five or to use the entire set of numbers. The student goes first and spins the More/Less/Same Spinner K.CC.8. Place a paperclip in the middle of the spinner and use the tip of a pencil to hold it in place and then spin the paperclip. If the spinner lands on more, the player takes one interlocking cube from the tutor. If the spinner lands on fewer, the player has to give one interlocking cube to the tutor. If the spinner lands on same, nothing happens. The winner is decided when one player has all of the interlocking cubes. 	
2. Introduce and review Key Academic Mathematics Vocabulary.		
<ul style="list-style-type: none"> Review over the Key Academic Mathematics Vocabulary Card K.CC.8 with the student. There are two different cards showing different representations of numbers. It is important to review over both cards. 		
INSTRUCT—Provide Explicit, Interactive Instruction		
3. State the objective.		
Say, "Today, we are going to play games using the words greater than, less than, and equal to."		
4. Provide explicit, step-by-step instructions.		
<ul style="list-style-type: none"> Show the student the Hungry Alligator (K.CC.6) Activity Sheet. Explain that the alligator always wants to eat the greater number. Have the student draw two Dot Cards. Determine which number is greater. Write the number next to the alligator's mouth. The number that is less is written on the right side. Have the student say, "_____" 		

is greater than _____. _____ is less than _____. _____ and _____ are (not) equal.”

- For example, if you draw three dots and seven dots, the student will say, “Seven is greater than three. Three is less than seven. Three and seven are NOT equal.”
- If the student rolls two numbers that are the same, the student gets to pretend to eat the equal numbers. Record the equal drawings on the bottom of the page.

1. Model.

- Model two different strategies for the student to determine which number is greater, less than, or equal to.
- Put counters on the ten frames. For example, three and five. Look how five fills more of the ten frame. Five is greater than three. Have the student compare two numbers using the ten frame.
- Mark the numbers on the number line and compare. See how five goes farther on the number line than three.

6. Check for understanding (work problem with student).

If the student needs additional guidance with counting objects, demonstrate how to touch each object as he/she counts. Guide him/her to look at the objects to see which card looks like it has more or less in relation to the other card. Use the two different strategies to model for the student again.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Observe the student figuring out which is greater than, less than, or equal to. Assist when needed in recording and using the sentence frame. Have the student say, “_____ is greater than _____. _____ is less than _____. _____ and _____ are (not) equal.”

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9.

Student works a problem while explaining EVERY step orally.

- Tutor and student each pull a card.
- Student counts and compares the two numbers and tells the tutor which is “greater than, less than, or equal to” with an explanation of how he/she knew.

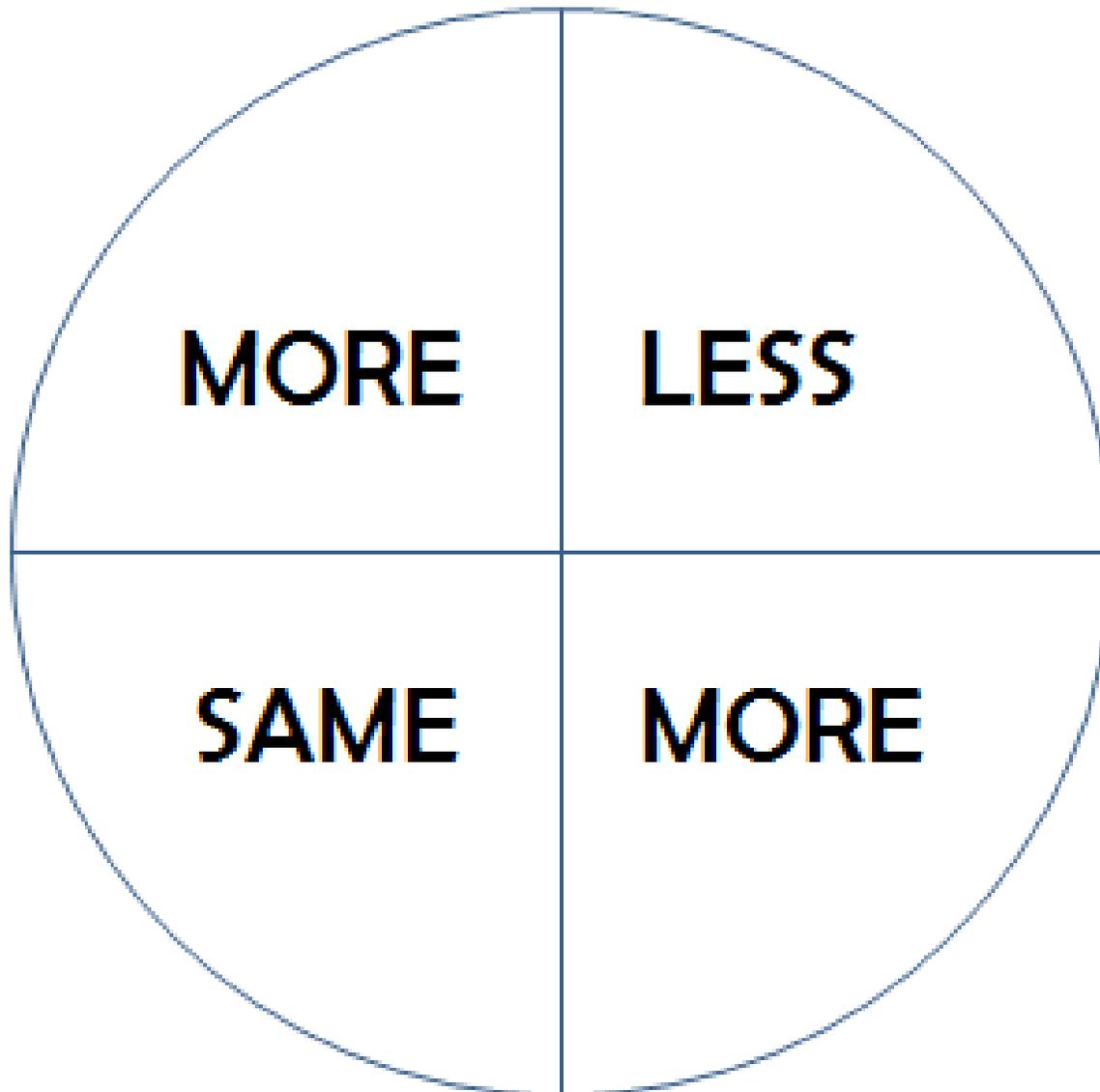
5 Minutes

5 Minutes

Dot Cards K.CC.6

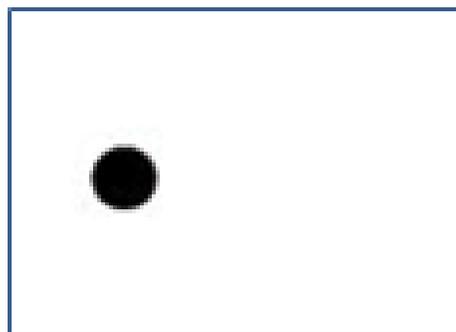
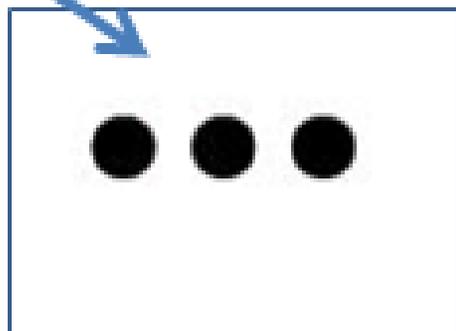
More/Fewer/Same K.CC.6



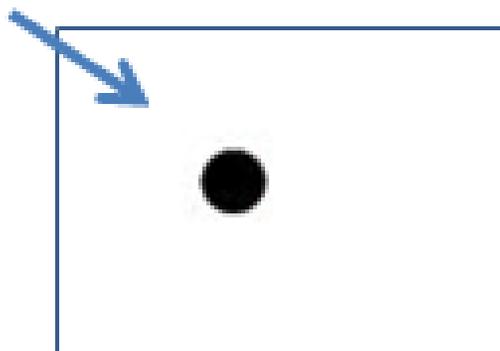
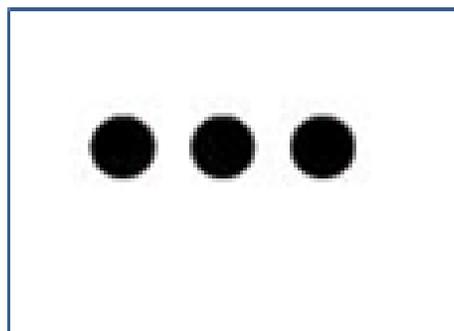
K.CC.6

Key Academic Math Vocabulary Cards

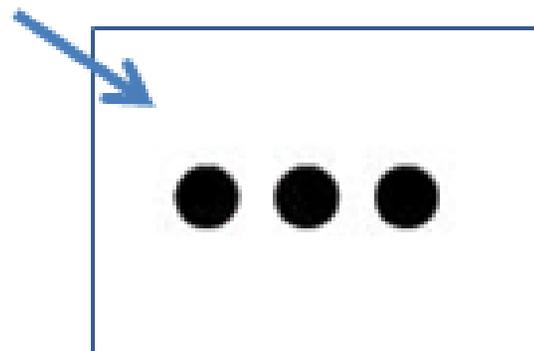
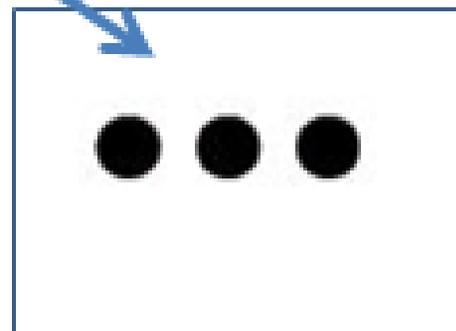
GREATER THAN



LESS THAN



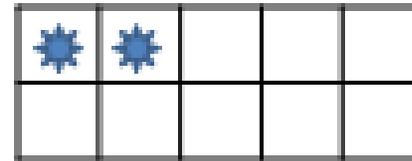
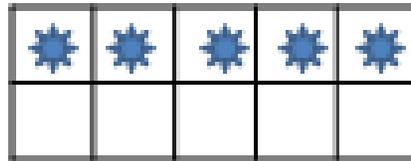
EQUAL TO



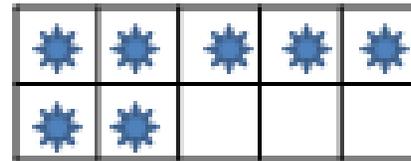
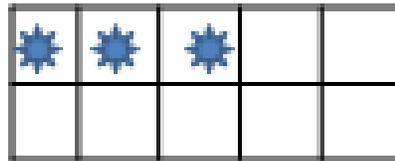
K.CC.6

Key Academic Math Vocabulary Cards

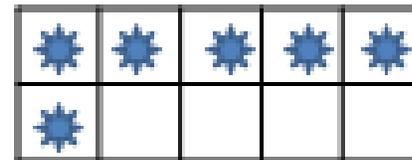
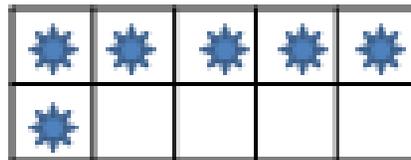
Greater Than



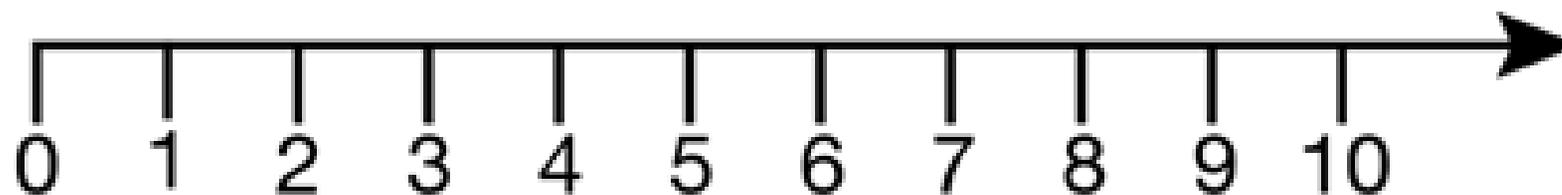
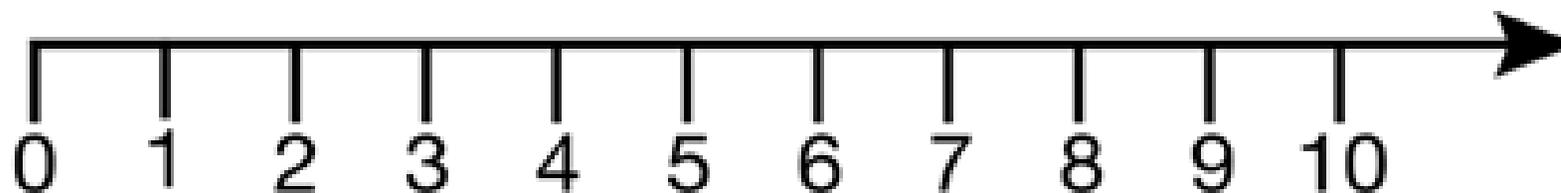
Less Than



Equal to

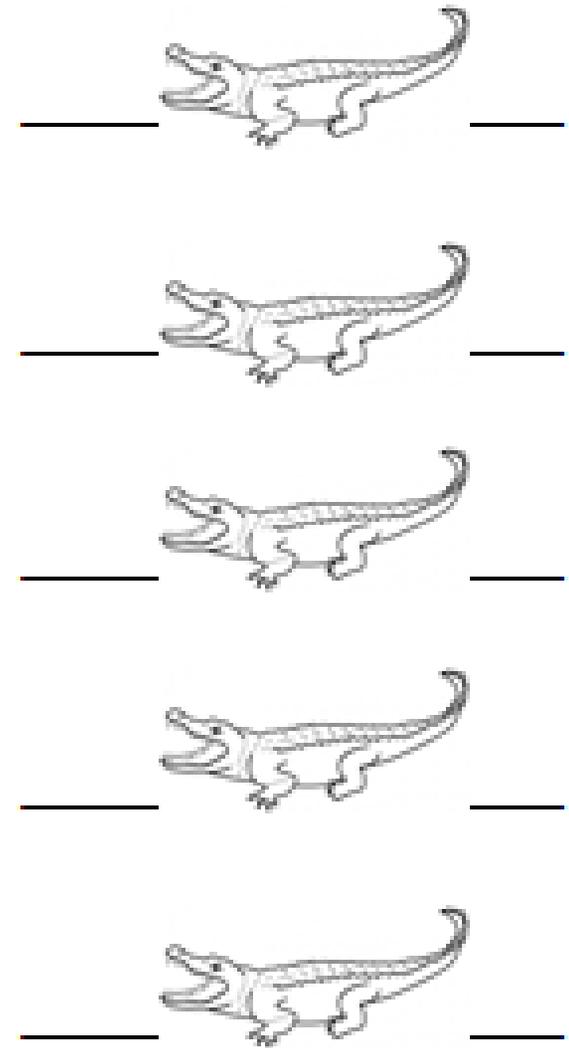
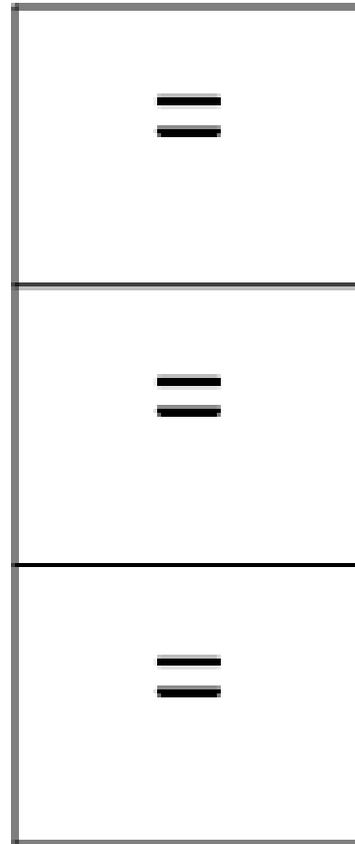
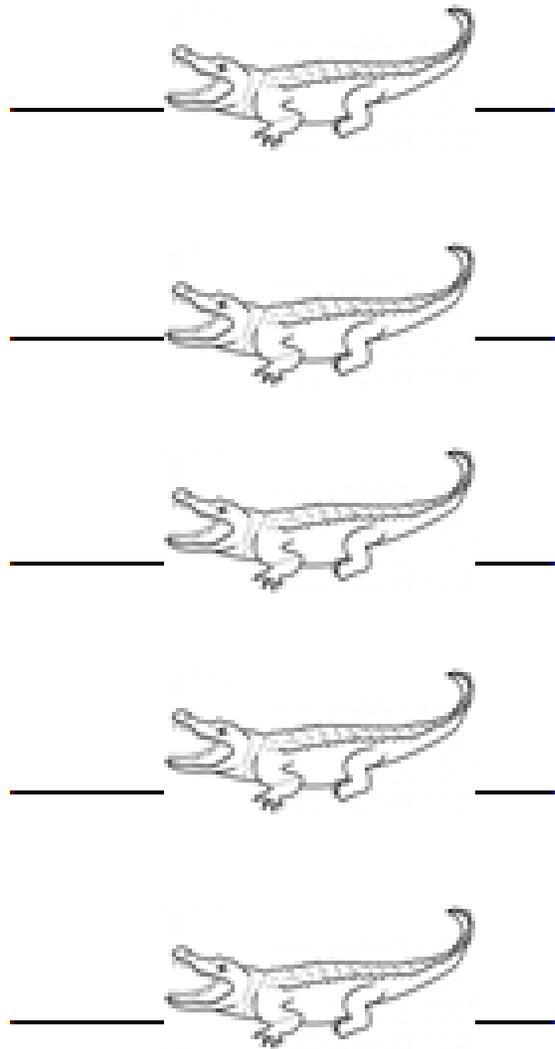


Number Line K.CC.6



Ten Frame K.CC.6

Hungry Alligator K.CC.6



Hungry Alligator K.CC.6



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=
=





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Counting and Cardinality	Cluster: Compare numbers.
	Standard 7: Compare two numbers between 1 and 10 presented as written numerals.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Greater than: a relationship between two amounts where one is larger than the other. Less than: a relationship between two amounts where one is smaller than the other. Equal to: a relationship between two amounts where they are both the same.	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> • Most young children understand the concept of more. Do NOT assume that because the student knows which set has more, he/she also knows which set has fewer. • Cut out three sets of Numeral Cards prior to the lesson. 	
	Materials you will need:	
	<ul style="list-style-type: none"> • Numeral cards 0-10 (3 sets) (K.CC.7) • 10 counters • Key Academic Mathematics Vocabulary Card (K.CC.7) • Number Line (K.CC.7) • Ten Frame (K.CC.7) • Which Number Will Win? (K.CC.7) (two copies—one for tutor, one for student) • 2 dice 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	<ol style="list-style-type: none"> 1. Connect to prior learning. Use a "hook" to gain the student's attention. <ul style="list-style-type: none"> • Each person needs a copy of "Which Number Will Win?" (K.CC.7). • Say, "We are going to roll the die and find out watch number we roll the most and which number we roll the least." • Roll the die. On the recording sheet, color in that number square. Continue this process by rolling the die and recoding the number rolled until one number has the most rolls and reaches the finish line. • Discuss with the student which number was rolled the most and which one was rolled the least. 2. Introduce and review Key Academic Mathematics Vocabulary. <ul style="list-style-type: none"> • Show the student the Key Academic Mathematics Vocabulary Card (K.CC.7). Discuss each of the vocabulary words with the student. 	
	INSTRUCT—Provide Explicit, Interactive Instruction	
8 Minutes	<ol style="list-style-type: none"> 3. State the objective. Say, "Today we are going to play a game about called 'Which is Greater?' We are going to figure out the greater number." 4. Provide explicit, step-by-step instructions. <ul style="list-style-type: none"> • Put the cards in a pile face down between you and the student. • Each person picks up one card. • Say, "We will each look at the number on the card we drew from the pile. Which card has the greatest number, yours or mine?" (Mine.) "Which card has the least?" (Yours.) "Are they equal?" (No.) "How do you know?" • The person with the card that shows the greatest amount says, "I have (number on his/her card). You have (number on the other person's card). (Number on his/her card) is greater than (number on the other person's card)." • Say, "If my card has the greatest number, I will take your card and my card. If your card has the 	

greatest number, you take both cards. If the cards have the same number, we each take one card. We will play until all the cards in the pile are gone.”

- Whoever has the most cards by the end of the game is the winner.

5. Model.

Model two different strategies for the student how to determine which number is greater.

- Put counters on the ten frame--for example, three and five. Notice how five fills more of the ten frame. Have the student compare two numbers using the ten frame.
- Mark the numbers on the number line and compare them.

6. Check for understanding (work problem with student).

- Have the student use both of the models to show that he/she understands how to determine which number is greater. In addition, have him/her use the models to show that he/she understands how to determine which number is less than or equal to.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- The student plays the game with the tutor so that the student is responsible for naming and comparing both numbers independently.
- As the student makes a decision about who can take the cards that were drawn from the pile, ask, “How did you know who could take the cards?” Guide the student in verbalizing that the number on a certain card is greater than another card. “_____ is greater than _____.”

ASSESS—Evaluate Student Demonstration

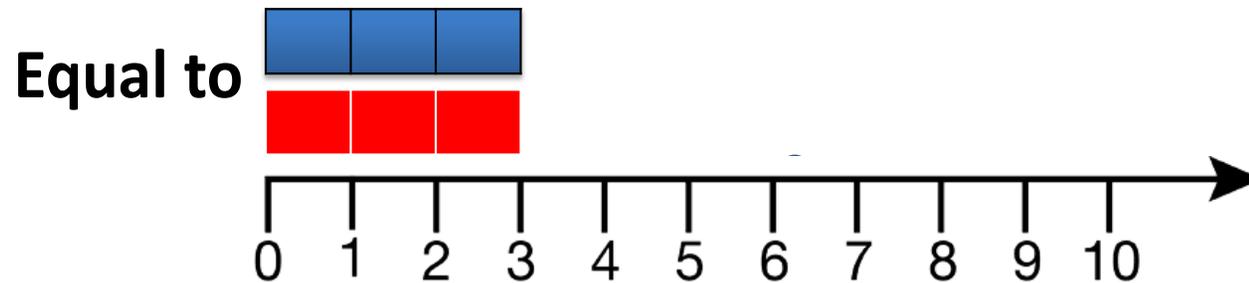
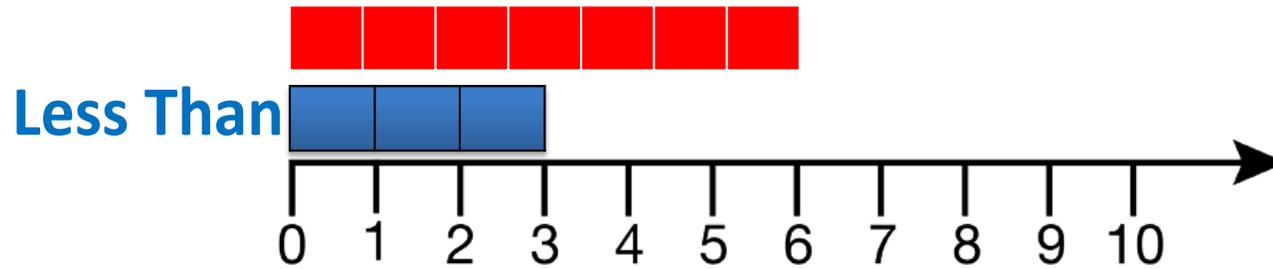
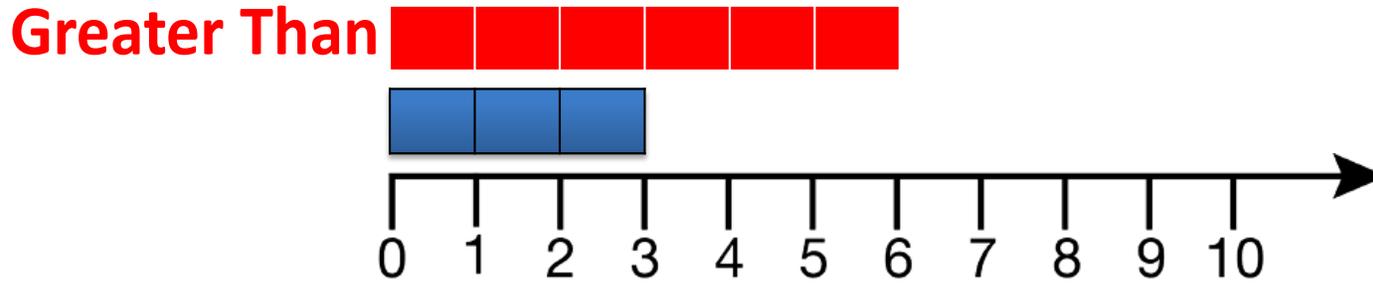
8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. /9. Student works a problem while explaining EVERY step orally.

- Draw two more numbers, and have the student use the model to explain how to determine which is greater, less than or equal to. Have the student explain the vocabulary of greater than, fewer than, and equal to.

5 Minutes

5 Minutes

Key Academic Math Vocabulary Cards: K.CC.7



K.CC.7
Numerical Cards 0 to 10

1

2

3

4

K.CC.7
Numerical Object Cards to 10

5

6

7

8

K.CC.7
Numeral Cards 0 to 10

9

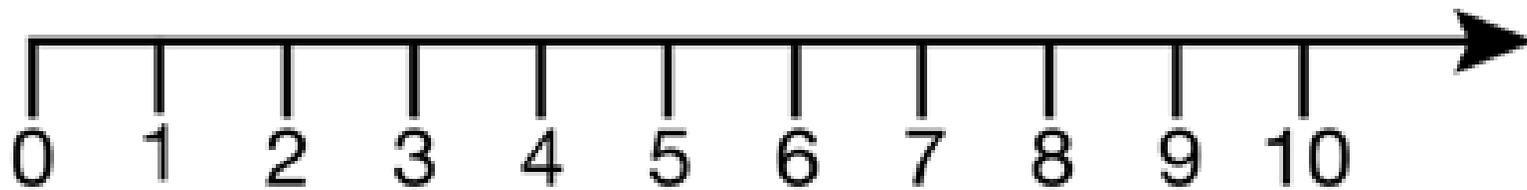
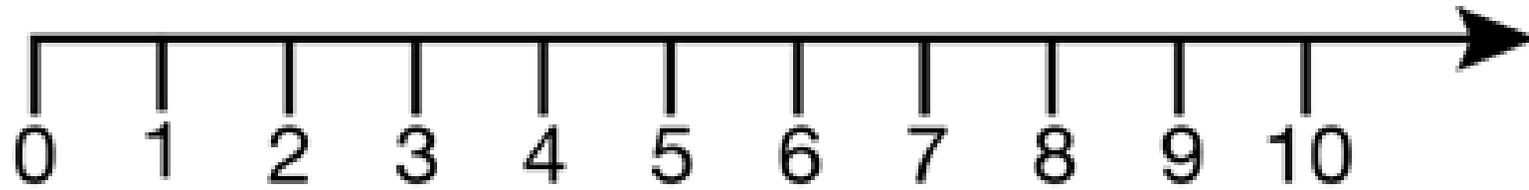
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Your Choice

Ten Frame K.CC.7

Number Line K.CC.7





Mathematics Tutoring Session Template

Common Core Identification

Domain: Operations and Algebraic Thinking

Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Standard 1: Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Key Academic Mathematics Vocabulary (3 or fewer)

Addition: putting together or adding to.

Subtraction: taking apart or taking away from.

Notes and Materials

Notes and suggestions for an effective lesson:

- Model language for students in different progressive levels.
- Note for addition: Remind students that $3 + 4 = 7$ is the same as "3 and 4 makes 7."
- Variations to say the same thing:
 - 3 and 4 make 7
 - 3 plus 4 makes 7
 - 3 plus 4 equals 7
- Note for subtraction: Remind the student that $5 - 3 = 2$ is the same as "5 take away 3 leaves 2."
- Variations to say the same thing:
 - 5 take away 2 makes 3
 - 5 take away 2 equals 3.
 - 5 minus 2 equals 3
- Start with adding and subtracting numbers 0-5, and then gradually increase the amount to 10.

Materials you will need:

- Finger Play: "Five Little Monkeys Jumping on the Bed" (Song K.OA.1)
- Key Academic Mathematics Vocabulary Card (K.OA.1)
- Bed Scene (K.OA.1)
- 20 counters
- Whiteboard or scratch paper
- Whiteboard marker

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Sing the finger play "Five Little Monkeys Jumping on the Bed" (song K.OA.1) with the student. It is a repetitive song, decreasing by one monkey each time it is sung.
- "Five little monkeys jumping on the bed. One fell off and bumped his head. Mama called the doctor and the doctor said, 'No more monkeys jumping on the bed!'" Next verse: "Four little monkeys jumping on the bed..." and so on.

2. Introduce and review Key Academic Mathematics Vocabulary.

- Place three counters on the table. Then place two more counters while saying, "I have three counters and I am adding two more counters. So I would write $2 + 3 =$ on the whiteboard. I will count how many I have now. I have five counters." (Write five as the solution to the equation.) "When I put more counters on the table, I am adding. I will read the equation. Read my equation with me. $2 + 3 = 5$."
- Remove one of the counters and say, "I had five counters and I took away one counter. So I would write $5 - 1 =$. Now, I will count how many I have left. I have four." (Write four as the solution the equation.) "Now I have four counters. When I take a counter away, I am subtracting. I will read the equation. Now read my equation with me. $5 - 1 = 4$."
- Place two counters on the table and tell the student to add one counter. "Let's write the equation. $2 + 1 =$."
- "How many counters do you have now?" (Three.) "Let's write three as our answer. Now, let's read the

Before You Begin

2 Minutes

equation. $2 + 1 = 3$.”

- Place three counters on the table and tell the student to remove one counter. “So I would write $3 - 1 =$ Now I will count how many I have left. I have two.” (Write two as the solution the equation.) “When I take a counter away, I am subtracting. I will read the equation. Now read my equation with me. $3 - 1 = 2$.”
- Talk about the vocabulary with Key Academic Mathematics Vocabulary Card (K.OA.1). Say the equations in at least two different ways.
- Helpful note for addition: Remind students that $3 + 4 = 7$ is the same as “3 and 4 makes 7.”
- Variations to say the same thing:
 - 3 and 4 make 7
 - 3 plus 4 makes 7
 - 3 plus 4 equals 7
- Helpful note for subtraction: Remind the student that $5 - 3 = 2$ is the same as “5 take away 3 leaves 2.”
- Variations to say the same thing:
 - 5 take away 2 makes 3
 - 5 take away 2 equals 3.
 - 5 minus 2 equals 3

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

Say, “Today, we are going to add and subtract using numbers 0-10.”

4. Provide explicit, step-by-step instructions.

- Place a **bedroom scene** in front of student.
- Give the student 10 counters. Say, “We are going to pretend that these counters are monkeys and we are going to add and subtract with these counters. I am going to tell a story problem and you will use the counters to solve the problem.”
- Say, “There were three monkeys jumping on the bed.” (Place three counters on the bed.) “If two more monkeys joined them, how many monkeys would be on the bed now? Let’s write our equation: $3 + 2 =$. Let’s count to see how many we have all together.” (Five.) “Let’s write our answer on our equation. I will read the equation. Now, read my equation with me. $3 + 2 = 5$.”

Continue with:

- “How many monkeys would be on the bed if one monkey jumped off?” Write the equation.
- “All the monkeys jumped off the bed. How many were left?” Write and say the equation.
- “There were two monkeys jumping on the bed. If two more monkeys joined them, how many monkeys would be on the bed?” Write and say the equation.
- “How many monkeys would be on the bed if one monkey jumped off?” Write and say the equation.
- Continue the story in a similar way with problems to ten.

1. Model.

- Model your thinking on how to solve the problem out loud for the student.
- Say, “There were three monkeys jumping on the bed.” (Place three counters on the bed.) “If two more monkeys joined them, how many monkeys would be on the bed now?”
- Place two more counters on the bed and count the total.
- Say, “Watch how I count the monkeys to figure out the answer. It is called adding when I put more monkeys on.”
- Say, “How many monkeys would be on the bed if one monkey jumped off?”
- Take one counter off and count the remaining counters. Say, “Watch how I count the monkeys to figure out the answer. It is called subtracting when I take away.”

6. Check for understanding (work problem with student).

- Say, “There are two monkeys jumping on the bed.” Direct the student to place two counters on the bed.
- Say, “If two more monkeys joined them, how many monkeys would be on the bed?” Direct the

student to place two more counters on the bed and count the total. “How would you write the equation on the whiteboard?”

- Say, “How many monkeys would be on the bed if one monkey jumped off?” Direct the student to take one counter off and count the remaining counters. “How would you write the equation on the whiteboard?” Assist as needed.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Continue to give the student addition and subtraction stories about the monkeys.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Ask, “If I have three monkeys on the bed and I add two more monkeys, how many monkeys will I have? How would I write and say the equation?” ($3 + 2 = 5$) Ask, “If I have five monkeys on the bed and I subtract one monkey, how many monkeys will I have? How would I write and say the equation?” ($5 - 1 = 4$)

5 Minutes

5 Minutes

K.OA.1

Key Academic Math Vocabulary Card

Putting together = ADDING

$$+ \begin{array}{c} \text{4 dots} \\ \text{hand} \end{array} + \begin{array}{c} \text{3 dots} \\ \text{hand} \end{array} = 7$$

Taking apart = SUBTRACTING

$$- \begin{array}{c} \text{4 dots} \\ \text{hand} \end{array} - \begin{array}{c} \text{1 dot} \\ \text{hand} \end{array} = 3$$

Five Little Monkeys Jumping on the Bed Song K.OA.1

“Five little monkeys jumping on the bed. One fell off and bumped his head. Mama called the doctor and the doctor said, “ No more monkeys jumping on the bed!”

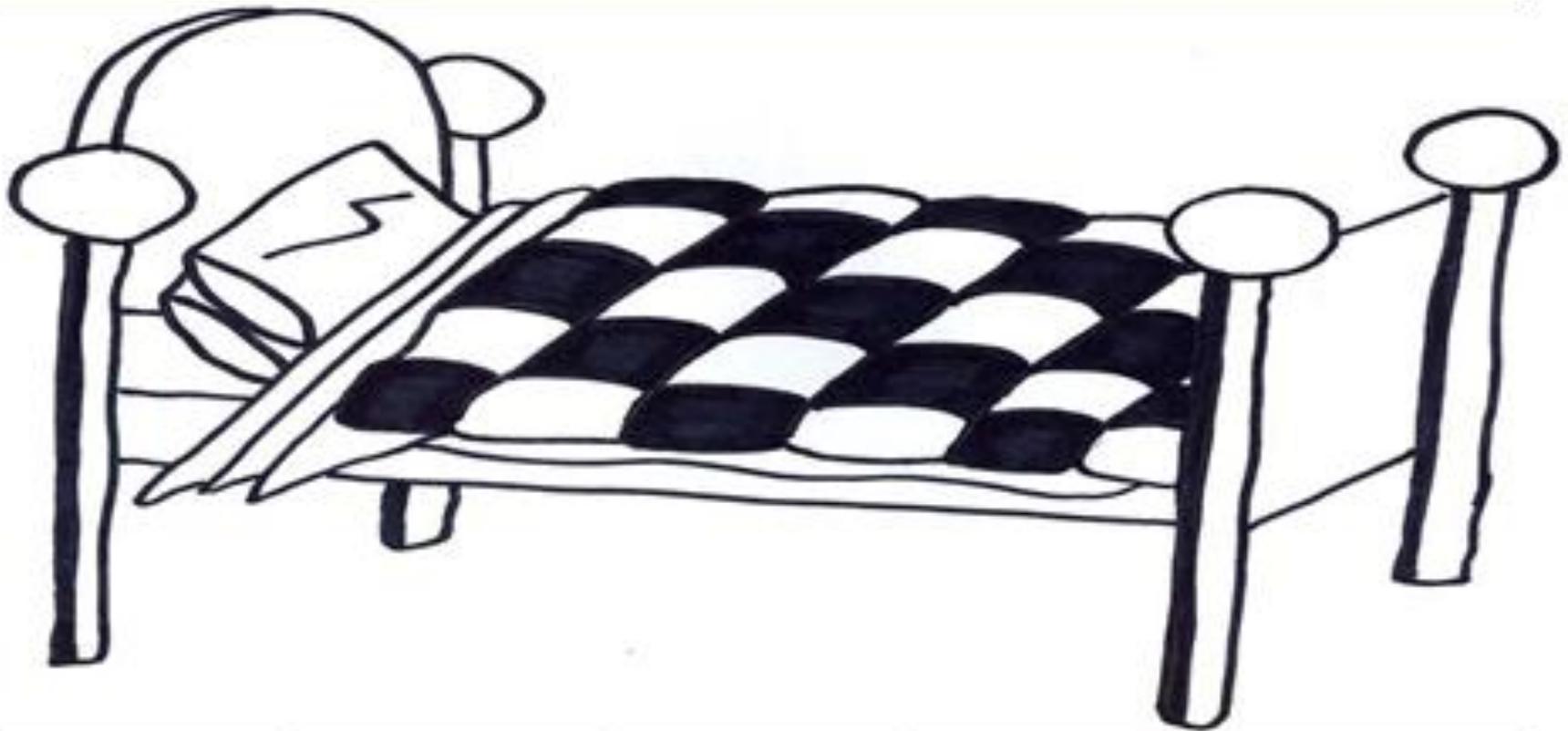
Next verse:

Four little monkeys jumping on the bed. One fell off and bumped his head. Mama called the doctor and the doctor said, “ No more monkeys jumping on the bed!”

Next verse:

Three little monkeys jumping on the bed..., (and so on).

K.OA.1 Bed Scene





Mathematics Tutoring Session Template

Common Core Identification

Domain: Operations and Algebraic Thinking

Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Standard 2: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Key Academic Mathematics Vocabulary (3 or fewer)

Addition: putting together or adding to.

Notes and Materials**Notes and suggestions for an effective lesson:**

- Model language for students in different progressive levels.
- Note for addition: Remind students that $3 + 4 = 7$ is the same as "3 and 4 makes 7."
- Variations to say the same thing:
 - 3 and 4 make 7
 - 3 plus 4 makes 7
 - 3 plus 4 equals 7

Materials you will need:

- Black Out Game (K.OA.2)
- Two six-sided dice
- 40 counters
- Two-sided counters (red and yellow counters)
- Small cup
- Super Hero Challenge (2 pages) (K.OA.2)

LAUNCH—Assess and Provide Background Knowledge**1. Connect to prior learning. Use a "hook" to gain the student's attention.**

- Say, "We are going to play a game called Black Out. Here are the directions to play the game. Roll two dice, add the numbers, and cover that number. Continue rolling the dice until all the numbers are covered."
- Students can "add" the numbers by counting how many are on each die.

2. Introduce and review Key Academic Mathematics Vocabulary.

- Show the student the Vocabulary Card (K.OA.2). Discuss how putting things together is called adding and taking things apart is called subtracting.

INSTRUCT—Provide Explicit, Interactive Instruction**3. State the objective.**

Say, "Today, we are going to play an adding game. We will practice putting things together.

4. Provide explicit, step-by-step instructions.

- Say, "We are going to play an addition game called Super Hero Challenge (K.OA.2.) Here are the directions on how to play the game. We are going to start with five counters in a cup. Shake it up and dump the cup out. Figure out the number sentence that matches. For example, if there are two red and three yellow, the number sentence is $2 + 3 = 5$."
- Continue with two more to finish level one.
- Go on to level two and then level three.
- Notice that the number of counters increases with each problem.
- TEACHING NOTE: Make sure the students say the number sentence after each shake.

5. Model.

- Addition Game: Model how to play for the student with the first problem.

Before You Begin

2 Minutes

8 Minutes

5 Minutes

6. Check for understanding (work problem with student).

- Ask the student, “What is the number sentence?” ($5 + 3 = 8$)
- What does the + sign mean?

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Observe the student and ask questions while the student plays the game.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.

- Show the addition sign and ask, “What does the + sign mean?”

5 Minutes

9. Student works a problem while explaining EVERY step orally.

- Give the student an answer, such as six. Have the student figure out the number sentence that matches by shaking six counters and pouring them out from a cup (for example, $2 + 4 = 6$). Have the student say and record the number sentence.

Black Out Game K.OA.2A

Directions: Roll 2 dice and cover that number. Continue until all the numbers are covered.

7	6	5	2	5	7
4	7	3	9	7	6
6	11	12	12	9	8
10	9	12	12	10	6
3	8	9	5	8	4
8	5	4	2	10	8

Super Hero Challenge K.OA.2A

LEVEL ONE: BEGINNER

+		=5
+		=5
+		=5

LEVEL TWO: ADVANCED

+		=4
+		=5
+		=6
+		=7
+		=8

Super Hero Challenge K.OA.2A

LEVEL THREE: EXPERT

+		=4
+		=5
+		=6
+		=7
+		=8
+		=9
+		=10
+		=10
+		=10
+		=10



Mathematics Tutoring Session Template

Common Core Identification

Domain: Operations and Algebraic Thinking

Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Standard 2b: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Key Academic Mathematics Vocabulary (3 or fewer)

Addition: putting together or adding to.

Subtraction: as taking apart or taking from.

Notes and Materials

Notes and suggestions for an effective lesson:

- Model language for students in different progressive levels.

Note: Remind students that $5 - 3 = 2$ is the same as 5 take away 3 leaves 2.

- Variations to say the same thing:
 - 5 take away 2 makes 3.
 - 5 take away 2 equals 3.
 - 5 minus 2 equals 3.
- Note for addition: Remind students that $3 + 4 = 7$ is the same as "3 and 4 makes 7."
- Variations to say the same thing:
 - 3 and 4 make 7
 - 3 plus 4 makes 7
 - 3 plus 4 equals 7

- Cut out Creepy Crawlies Subtraction Match (K.OA.2) prior to lesson.
- Student crosses out directly onto the cards to solve the problems. There are two cards for every answer.

Materials you will need:

- 1 six-sided die
- 40 interlocking cubes
- 40 counters or small objects
- Two-sided counters (red and yellow counters)
- Small cup
- Creepy Crawlies Subtraction Match (K.OA.2)
- Creepy Crawlies Practice Page (K.OA.2)

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Each person gets 20 interlocking cubes. Help the student count out the correct amount. Each person will roll the die and remove that many cubes. The first person to have zero cubes wins. Repeat.

2. Introduce and review Key Academic Mathematics Vocabulary.

- Show the student the Vocabulary Card (K.OA.2). Discuss how putting things together is called adding and taking things apart is called subtracting.

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

- Say, "Today we are going to play a subtraction matching game called Creepy Crawlies" (K.OA.2A).

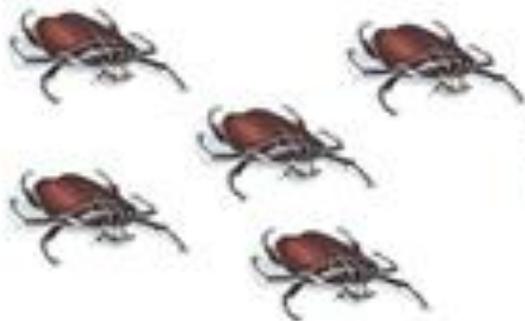
Before You Begin

2 Minutes

8 Minutes

5 Minutes	<p>4. Provide explicit, step-by-step instructions.</p> <ul style="list-style-type: none"> • Model how to solve subtraction problems using the cross method for the student on the Creepy Crawly Practice Page. • Say, “The subtraction sign means take away. To show taking away, I am going to cross out the number I am taking away. For example, $5 - 3 = 2$. I have five bugs, and I am going to take away or subtract three bugs. Watch as I cross out three bugs. How many bugs are left?” (Two.) Recount with the student. Repeat the process as necessary.
	<p>5. Model.</p> <ul style="list-style-type: none"> • Show the student how to solve each problem and then match it to the correct number.
	<p>6. Check for understanding (work problem with student).</p> <ul style="list-style-type: none"> • Ask, “What does the $-$ sign mean?”
5 Minutes	<p>GUIDED PRACTICE—Monitor Student Work</p>
	<p>7. Student works problems independently while tutor watches and coaches.</p> <ul style="list-style-type: none"> • Watch and ask questions while the student matches the number sentences with the answers. The student crosses out directly onto the cards to solve the problems. There are two cards for every answer.
5 Minutes	<p>ASSESS—Evaluate Student Demonstration</p>
	<p>8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.</p> <ul style="list-style-type: none"> • Show the subtraction sign and ask, “What does the $-$ sign mean?” • Ask the student to solve $4 - 3$. Observe the student and assist when needed. Have the student explain each step he/she takes to solve the problem.

Creepy Crawlies Practice Page K.OA.2B



$$5 - 2 =$$



$$4 - 3 =$$



$$3 - 0 =$$

Creepy Crawlies K.OA.2B

1

2

3

4

5

0

Creepy Crawlies K.OA.2B



$$3 - 1 =$$

$$2 - 0 =$$

$$5 - 2 =$$



$$5 - 4 =$$

$$4 - 1 =$$

$$5 - 1 =$$

Creepy Crawlies K.OA.2B



$$5 - 0 =$$



$$6 - 1 =$$



$$1 - 1 =$$



$$0 - 0 =$$

$$4 - 3 =$$



$$2 - 1 =$$



Mathematics Tutoring Session Template

Common Core Identification

Domain: Operations and Algebraic Thinking

Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Standard 3: Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

Key Academic Mathematics Vocabulary (3 or fewer)

Addition: putting together or adding to.

Subtraction: as taking apart or taking from.

Notes and Materials

Notes and suggestions for an effective lesson:

- Cut out ladybugs from the Ladybug Spots K.OA.3. (2 sets) prior to lesson.

ADDITION

- Note: Remind students that $3 + 4 = 7$ is the same as "3 and 4 makes 7."
- Variations to say the same thing:
 - 3 and 4 is 7.
 - 3 and 4 makes 7.
 - $3 + 4$ makes 7.
 - $3 + 4$ equals 7.

SUBTRACTION

- Note: Remind students that $5 - 3 = 2$ is the same as "5 take away 3 leaves 2."
- Variations to say the same thing:
 - 5 take away 2 makes 3.
 - 5 take away 2 equals 3.
 - 5 minus 2 equal 3.
- Encourage the student to use the pictures to help solve the problems.

Materials you will need:

- 20 counters
- Vocabulary Card (K.OA.3)
- Ladybug Spots (K.OA.3) (two sets cut out)

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Ask the student to take five counters and lay them in a line on the table. Say, "There are numbers hidden inside of five. Let's discover what numbers are hidden. Watch—I can see two," (push two counters to one side) "and I can see three" (push three counters to the other side). "All together they make five. So the hidden numbers in five are two and three. Wait, I can find more hidden numbers." (Put the same five counters back in a line.) "Look, I see one," (push one counter to one side) "and I can see three" (push four counters to the other side). "What are the hidden numbers in five?" (Four and one.)
- Repeat with the numbers four and six.

2. Introduce and review Key Academic Mathematics Vocabulary.

Show the student the Vocabulary Card (K.OA.1). Discuss how putting things together is called adding and taking things apart is called subtracting.

Before You Begin

2 Minutes

INSTRUCT—Provide Explicit, Interactive Instruction**3. State the objective.**

Say, “Today we will be playing a mystery adding game with ladybugs.”

4. Provide explicit, step-by-step instructions.

- Say, “We are going to play an addition game called Ladybug Challenge (K.OA.3). The challenge is for you to put together two ladybugs to make each answer. For example, what if I take the “five” ladybug and put it with the “three” ladybug?”

5. Model

- I will count how many ladybugs I have. I have eight ladybugs, so I could write $8 = 5 + 3$. Now, I need to find the ladybugs that will equal to the other answers.

6. Check for understanding (work problem with student).

- Ask the student, “What is the number sentence?” ($5 + 3 = 8$)
- “What does the + sign mean?”

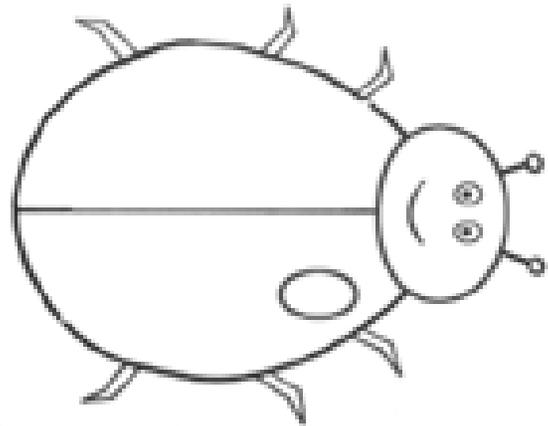
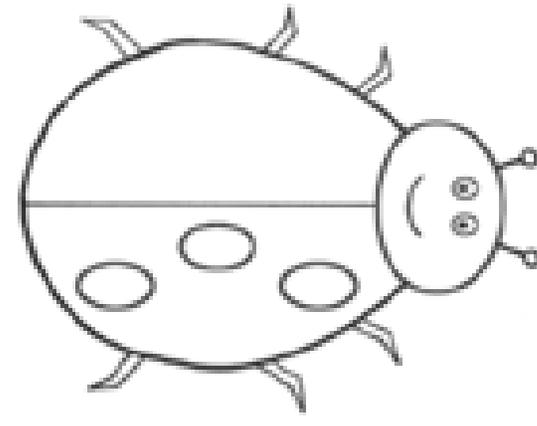
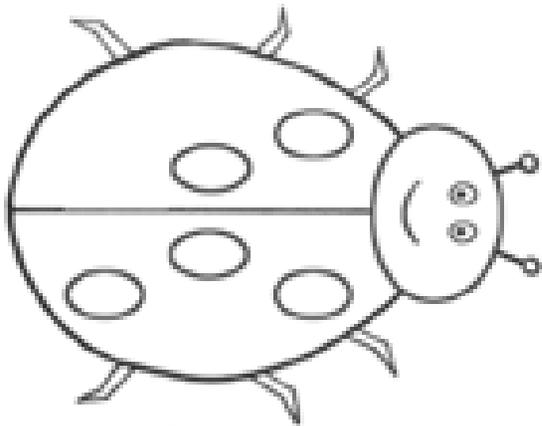
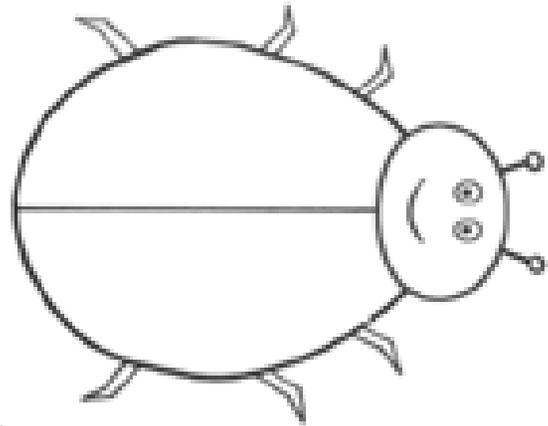
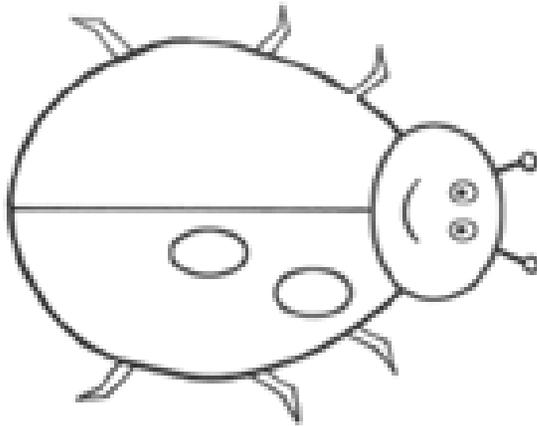
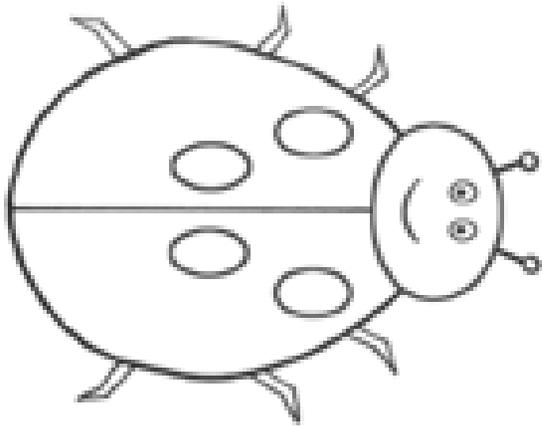
GUIDED PRACTICE—Monitor Student Work**7. Student works problems independently while tutor watches and coaches.**

- Assist the student in making different combinations to equal the correct sum. Ask questions or make suggestions for strategies to get sums that the student is struggling with. For example, for the sum of ten, ask “Which kinds of ladybugs should we try with such a large number—ladybugs with more spots or fewer spots?”

ASSESS—Evaluate Student Demonstration

- 8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.**
- 9. Student works a problem while explaining EVERY step orally.** Choose two different ladybugs and have the students find how many there are in all. Repeat three times. Assist student when needed.

Ladybugs K.OA.3



Ladybug Challenge K.OA.3

2=	+	
3=	+	
4=	+	
5=	+	
6=	+	
7=	+	
8=	+	
9=	+	
10=	+	



Mathematics Tutoring Session Template

Common Core Identification

Domain: Operations and Algebraic Thinking

Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Standard 4: For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Key Academic Mathematics Vocabulary (3 or fewer)

Addition: putting together or adding to.

Subtraction: taking apart or taking from.

Notes and Materials

Notes and suggestions for an effective lesson:

- Model language for students in different progressive levels.

Note: Remind students that $3 + 4 = 7$ is the same as 3 and 4 makes 7.

- Variations to say the same thing:
 - 3 and 4 is 7.
 - 3 and 4 makes 7.
 - $3 + 4$ makes 7.
 - $3 + 4$ equals 7.

It will assist with understanding by once the student has placed the ten counters on the table that they are not to be moved. This is so the student focuses on making of the different partners to ten, not the total of ten.

Materials you will need:

- Vocabulary Card (K.OA.1)
- 50 small objects
- Whiteboards
- Whiteboard marker
- Pencil
- Race to the Top (K.OA.4)

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Have the student take counting objects and put them into groups of 10.

2. Introduce and review Key Academic Mathematics Vocabulary.

- Show the student the Vocabulary Card (K.OA.1). Discuss how putting things together is called adding and taking things apart is called subtracting.

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

Say, "Today we are going to add numbers together that to equal 10 using special math tools."

4. Provide explicit, step-by-step instructions.

- Have the student count out 10 objects and lay them in a line. (Keep this the same for the lesson.)
- Ask the student how many objects he/she had. (Ten.)
- Say, "We are going to break the 10 objects into two parts with a pencil."



- Say, "Now, let's record the partners. Six and four make 10. We can say it another way: Six and four is

Before You Begin

2 Minutes

8 Minutes

10.”

- “Six and four make 10, or six plus four equals 10. Let me show you how to write the equation on the whiteboard.” (Write $6 + 4 = 10$.)

5. Model.

- Say, “Remove the pencil and let’s break apart 10 into different partners.”



- Say, “Let’s record the partners. Two and eight make 10. Let me show you how to write the equation on the whiteboard.” (Write $2 + 8 = 10$.)

6. Check for understanding (work problem with student).

- Remove the pencil and ask the student to break apart 10 into two different partners. Have the student record the partners on the whiteboard and say the equation.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Say, “We are going to play a game now. It is called Race to the Top. The object of the game is to write as many partners to ten as you can.”
- Have the student record as many different partners to ten as he/she can make on the Race to the Top Game board (K.OA.4). The student “wins” when he/she reaches the top. He/she may write duplicate equations. Try to help him/her write a variety, such as $0 + 10 = 10$ and $9 + 1 = 10$.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Have the student lay out seven objects. Then ask him/her if he/she can tell you two different partner sets that equal seven.

5 Minutes

5 Minutes

K.OA.1

Key Academic Math Vocabulary Card

Putting together = ADDING

$$+ \begin{array}{c} \text{4 hands with 4 dots} \\ 4 \end{array} + \begin{array}{c} \text{3 hands with 3 dots} \\ 3 \end{array} = 7$$

Taking apart = SUBTRACTING

$$- \begin{array}{c} \text{4 hands with 4 dots} \\ 4 \end{array} - \begin{array}{c} \text{1 hand with 1 dot} \\ 1 \end{array} = 3$$



Mathematics Tutoring Session Template

Before You Begin

Common Core Identification

Domain: Operations and Algebraic Thinking

Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Standard 5: Fluently add and subtract within 5.

Key Academic Mathematics Vocabulary (3 or fewer)

Addition: putting together or adding to.

Subtraction: taking apart or taking from.

Notes and Materials

Notes and suggestions for an effective lesson:

- Model language for students in different progressive levels.

Note: Remind students that $5 - 3 = 2$ is the same as 5 take away 3 leaves 2.

- Variations to say the same thing:
 - 5 take away 2 make 3.
 - 5 take away 2 equals 3.
 - 5 minus 2 equals 3.

Materials you will need:

- Two dice (0-5)
- "Moo'-ve It" game board (K.OA.5)
- "Moo'-ve It" Recording Sheet (K.OA.5)
- 10 counters of two different colors
- 10 counters
- Whiteboard
- Whiteboard marker

2 Minutes

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Says, "The farmer had five cows in the field. It was a hot day, so two of them moved into the barn. How many cows are left in the field?" (Allow the child to represent the story problem using the cubes.)
- Tell him/her, "We can write this story problem as $5 - 2 = 3$. The '-' symbol is a way to write 'take away' or 'minus.' The = symbol means equals, or the same as. If I were to read this number sentence, I would say, 'Five take away two equals three,' or five take away two is the same as three."

2. Introduce and review Key Academic Mathematics Vocabulary

- Say, "We subtract when we take something away. In our story problem we took two away from five and had three left. So I would write it as $5 - 3 = 2$." Show the student the Vocabulary Card (K.OA.1). Discuss how putting things together is called adding and taking things apart is called subtracting.

8 Minutes

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

Say, "Today, we will be playing a cow subtraction game called "Moo'-ve It."

4. Provide explicit, step-by-step instructions.

- Explain the rules of the game to the student. "We each will each have three counters. We will take turns rolling two dice. When it is my turn, I will take the larger number and put it first on the recording sheet. The smaller number will be the second number I record. Next I will solve the problem and write the answer. Then I will find that number on the game board and put one of my counters on it. If the

square already has your marker on it, I will say, 'Moo-ve it.' I will take your marker off and put my marker on. Then it will be your turn. The first player to put all three of his/her markers on the game board is the winner.”

5. Model.

- Go first to show the student how to play the game. Model how to write the equation by looking for the larger number and then the smaller number. Then use counters to model how to solve the problem. Put out four counters and take away two counters, which equals two counters. In addition, show the student how to solve the problem on his/her fingers. Show four fingers, push down two fingers, and count how many fingers are left.

6. Check for understanding (work problem with student).

- When it's the child's turn, watch him/her play and answer clarifying questions as needed.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Continue to take turns playing the game. Make sure that the student plays correctly.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Give the student these three problems to solve. Assist when needed.
 - $3 - 2 =$
 - $5 - 3 =$
 - $4 - 0 =$
- Have the student explain how to solve these problems using fingers and/or counters.

5 Minutes

5 Minutes

"MOO"ve It K.OA.5

1	2	3	4
5	0	4	5
3	2	1	0
1	5	4	3

**MOO-VE
IT!**





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Number and Operations in Base Ten	Cluster: Work with numbers 11-19 to gain foundations for place value.
	Standard 1: Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Tens: a number representing a group of 10 units. Ones: a single unit.	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> Remind the students that the symbol "+" just means add. Cut out the Matching Game (K.NBT.1) prior to the lesson. 	
	Materials you will need:	
	<ul style="list-style-type: none"> 20 small counters or manipulatives Number Patterns Handout (K.NBT.1) Matching Game (K.NBT.1) Key Academic Math Vocabulary Card 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> Show the student the Number Patterns Handout (K.NBT.1). Elicit as much information about the patterns as you can from the student. He/she will notice many things. Encourage discussion. Count from 1 through 20 in order. Point to each number as he/she counts. Have the student count 14 objects. Ask the student to think about ways that he/she can organize the objects to be able to count them quickly. For example, the student could put it in rows or push each one into a pile after it is counted. 	
	2. Introduce and review Key Academic Mathematics Vocabulary.	
	<ul style="list-style-type: none"> Say, "We are going to work on putting objects into groups of tens and extra ones. Let me show you a group of ten. Take the 14 objects the student just counted and put into groups of tens and extra ones. Let's count it together. Let me show you the ones. Let me show you the tens." Count them together again. Have the student point to the group of ten and point to the ones. 	
8 Minutes	INSTRUCT—Provide Explicit, Interactive Instruction	
	3. State the objective.	
	Say, Today, we are going to play a matching game with teen numbers. We will be putting teen numbers into groups of tens and ones."	
4. Provide explicit step-by-step instructions.		
<ul style="list-style-type: none"> Focus the student's attention on the right column of the Number Pattern Handout (K.NBT.1). Explain that these are teen numbers, and that the number on the left side tells how many groups of 10 are in the number. Then explain that the number on the right tells how many extra ones there are. Point to the 10 on the poster. Help the student analyze 10. Say, "How many tens are there? Circle the '1' in the tens column." (One ten.) "Count the 10 circled dots in the diagram that stand for one group of ten." "How many extra ones are there? (Zero) The extra ones are shown on the right. Circle the 0 in the ones column. How many dots are outside the ring? (zero)" Point to the 11 on the poster. Help the student analyze 11. "How many tens are there? Circle the '1' in the tens column." (One ten.) "Count the 10 circled dots in the diagram that stand for 1 group of ten. 		

How many extra ones are there?" (One.) "The extra ones are shown on the right. Circle the one in the ones column. How many dots are outside the ring?" (One.)

- Continue for all the numbers.

5. Model.

Have the student play the Matching Game K.NBT.1. Have the student explain why they choose to match two cards together. Use the chart to help find matches.

6. Check for understanding (work problem with student).

- Ask the student,
 - "Can you show me where a ten is?"
 - "Can you show me where the ones are?"
 - "Explain how many tens and ones 13 has."
- Assist the student as needed.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Have the student put 12 objects into groups of tens and extra ones.
- Continue with other teen numbers. Refer back to the Number Pattern Handout (K.NBT.1) after each number and have the student point out the tens and extra ones.

ASSESS—Evaluate Student Demonstration

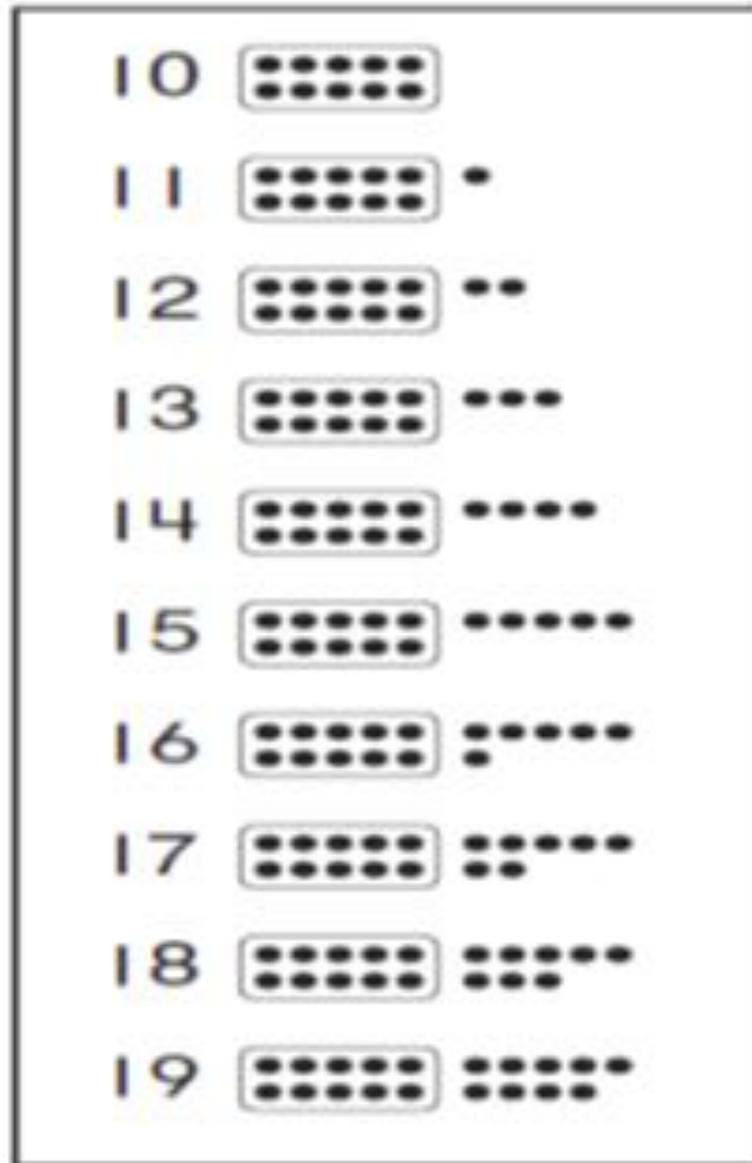
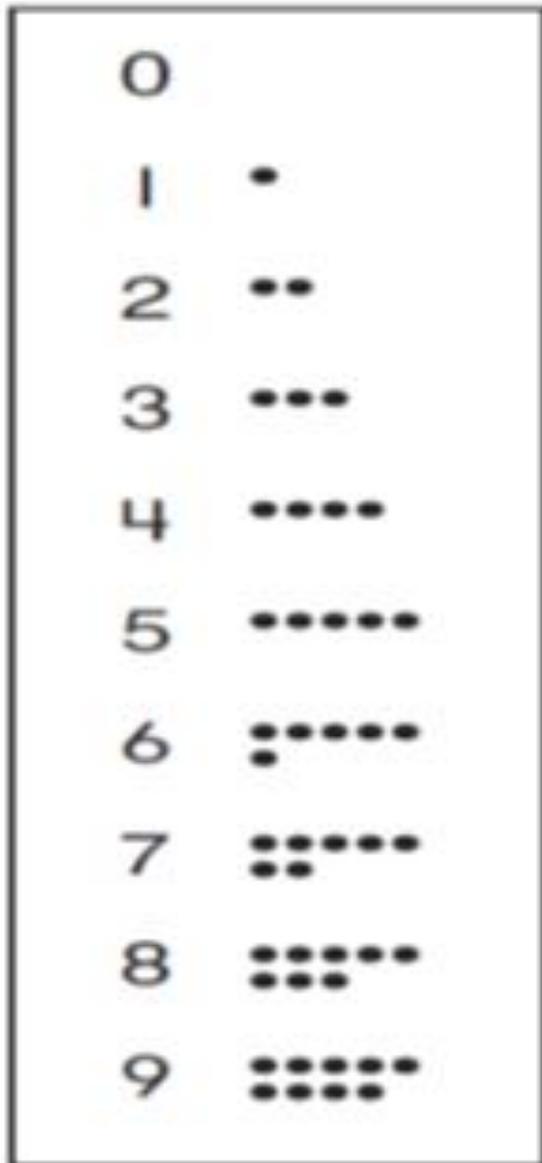
8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. /9. Student works a problem while explaining EVERY step orally.

Have the student orally explain how to put the number 17 into groups of tens and ones. Have the student match 16, 13, 11.

5 Minutes

5 Minutes

Number Patterns K.NBT.1



Matching Game K.NBT.1

10

11

12

13

14

15

16

17

18

19

Matching Game K.NBT.1

1 ten and 0 ones

1 ten and 1 one

1 ten and 2 ones

1 ten and 3 ones

1 ten and 4 ones

1 ten and 5 ones

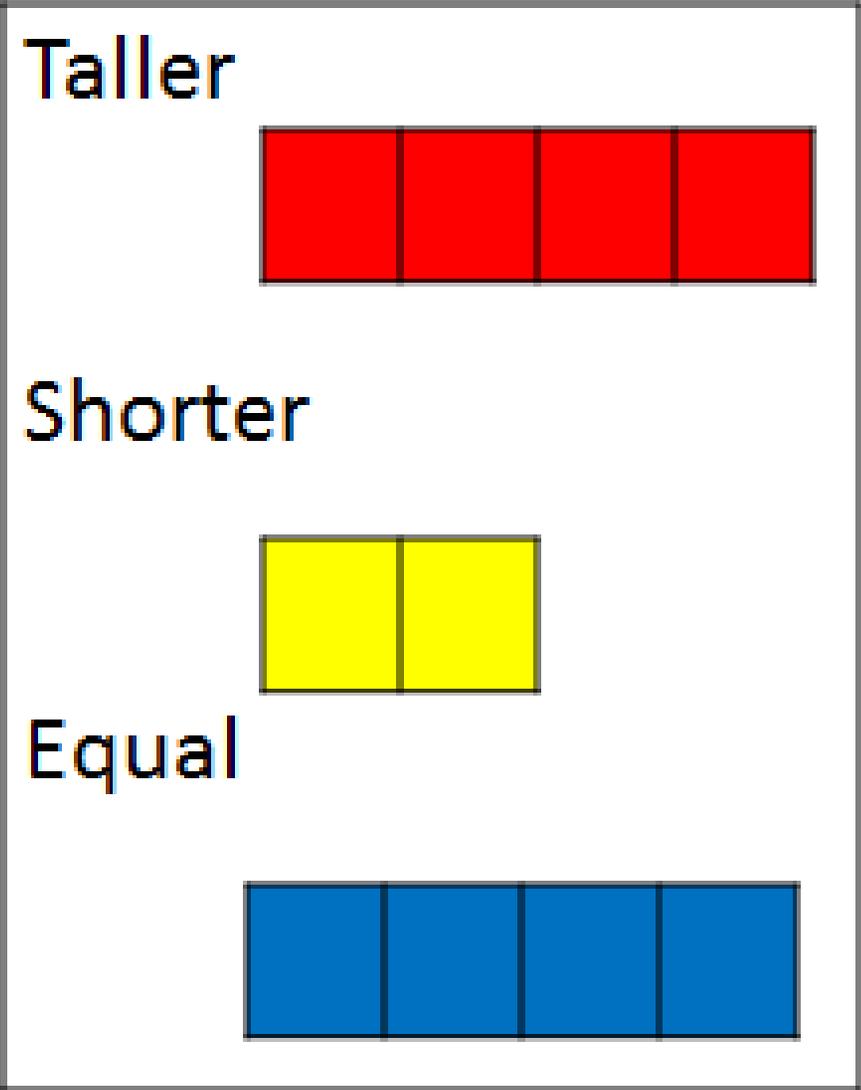
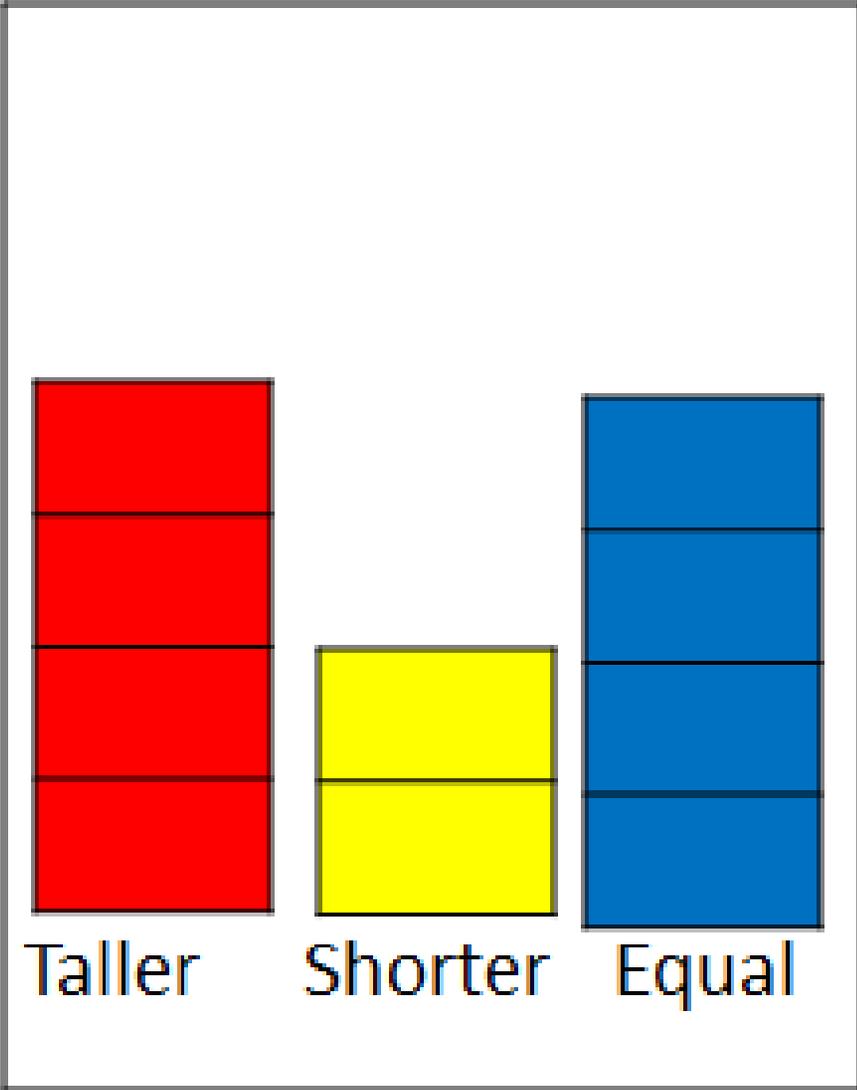
1 ten and 6 ones

1 ten and 7 ones

1 ten and 8 ones

1 ten and 9 ones

K.MD.1
Key Academic Math Vocabulary Card





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Measurement and Data	Cluster: Describe and compare measurable attributes.
	Standard 1: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> Cut out School Pictures K.MD.1 prior to lesson 	
	Materials you will need:	
8 Minutes	<ul style="list-style-type: none"> Stuffed animal "Which is Longer?" Activity Sheet (K.MD.1.) School Pictures(K.MD.1) What Can You Measure Assessment (K.MD.1) 	
	LAUNCH—Assess and Provide Background Knowledge	
	<p>1. Connect to prior learning. Use a "hook" to gain the student's attention.</p> <ul style="list-style-type: none"> Say, "We are going to measure things today. I want to know what I could measure on our stuffed animal. For example, I could measure how long the stuffed animal is." (Run your finger down the length of the stuffed animal.) "What else could I measure on the stuffed animal?" (Eyes, nose, ears, face, body, feet, weight.) Have the student show what they would measure with his/her finger. If he/she says "Eye," ask long the eye is and run your finger along the length of the eye or how tall the eye is and run your finger along the width of the eye. 	
	<p>2. Introduce and review Key Academic Mathematics Vocabulary.</p>	
INSTRUCT—Provide Explicit, Interactive Instruction		
<p>3. State the objective.</p> <p>Say, "Today, we are going to talk about all the different ways we can measure objects."</p>		
<p>4. Provide explicit, step-by-step instructions.</p> <ul style="list-style-type: none"> Say, "Now, look at yourself. What are some things that we could measure on your body?" (Eyes, arm, leg, nose, ears, face, body, feet, and weight.) Say, "Now let's look at some objects found at school." (School Pictures [K.MD.1] cut-out.) "Pick up the paper. I want to measure this paper. What could I measure on this paper?" (How tall it is, how wide it is, how much it weighs.) "I want to measure the longest part of this paper. Where would I measure? What is the longest part?" 		
<p>5. Model.</p> <ul style="list-style-type: none"> Continue asking the same questions with the rest of the school objects. Say, "What could I measure on this _____?" (How tall it is, how wide it is, how much it weighs.) "I want to measure the longest part of this _____. Where would I measure? What is the longest part?" 		
<p>6. Check for understanding (work problem with student).</p> <ul style="list-style-type: none"> Say, "I want to find out which is longer, the paper or the crayons." (Hold up both pictures.) "How could I find out which one is longer?" Students may suggest different measuring devices, but focus on comparing just the two objects. If the student does not suggest placing the objects next to each other, 		

model for the student and say, “I put the longest side of the paper against the longest side of the crayons. I can see that the paper is longer.”

5 Minutes

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Compare the school objects using the “Which Is Longer?” Activity Sheet (K.MD.1). Assist the student with comparing the objects by using the longest side.

5 Minutes

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. Student works a problem while explaining EVERY step orally.

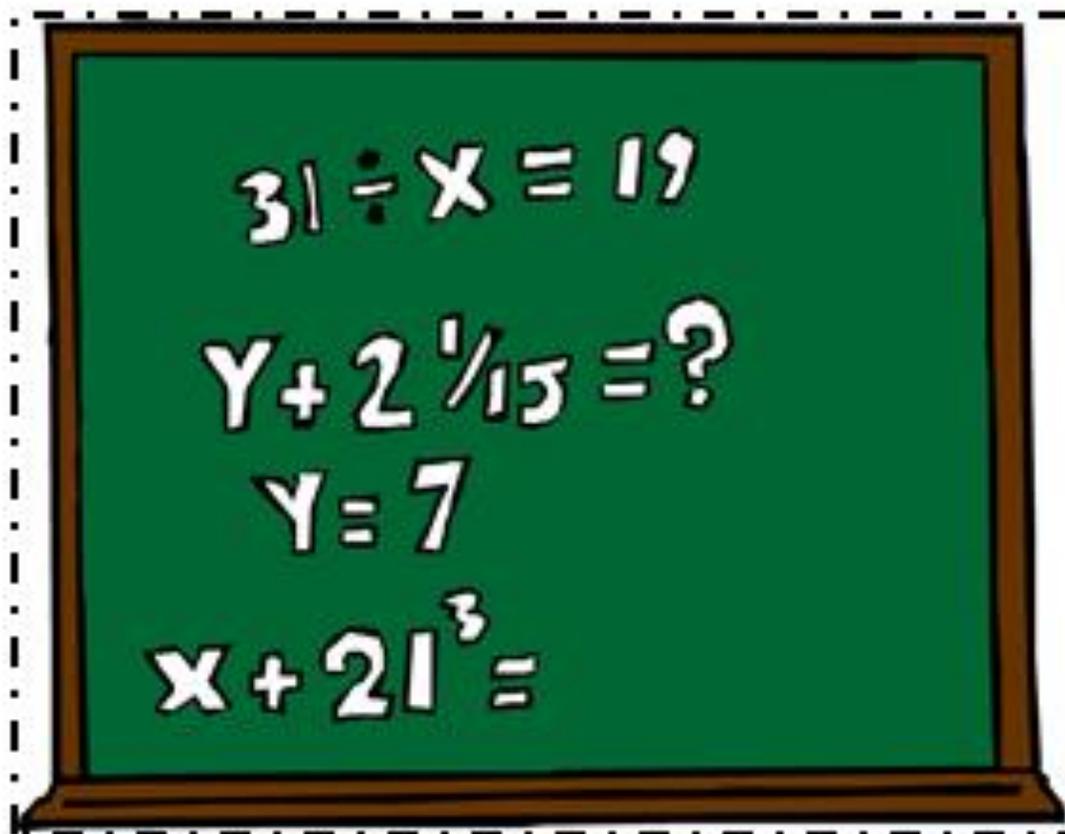
- Look at the “What Can You Measure?” Assessment (K.MD.1). Ask the student what he/she could measure on the spider. What is the longest side of the spider?
- What could you measure on the boy? What is the longest side?

Which is Longer Activity Sheet K.MD.1

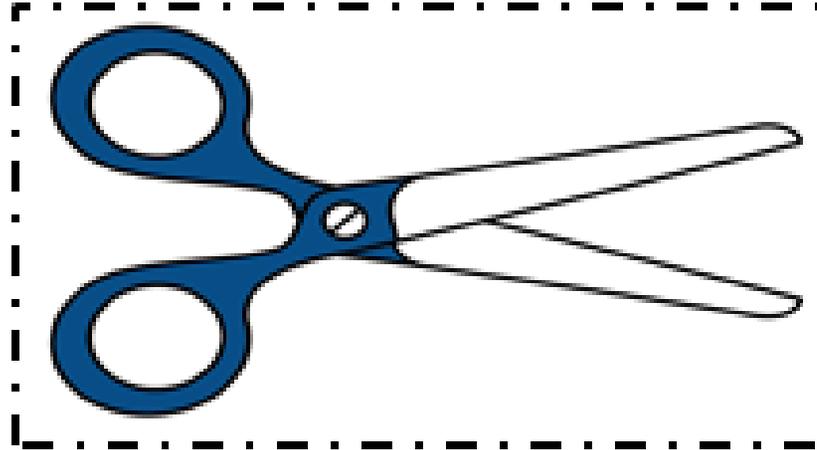
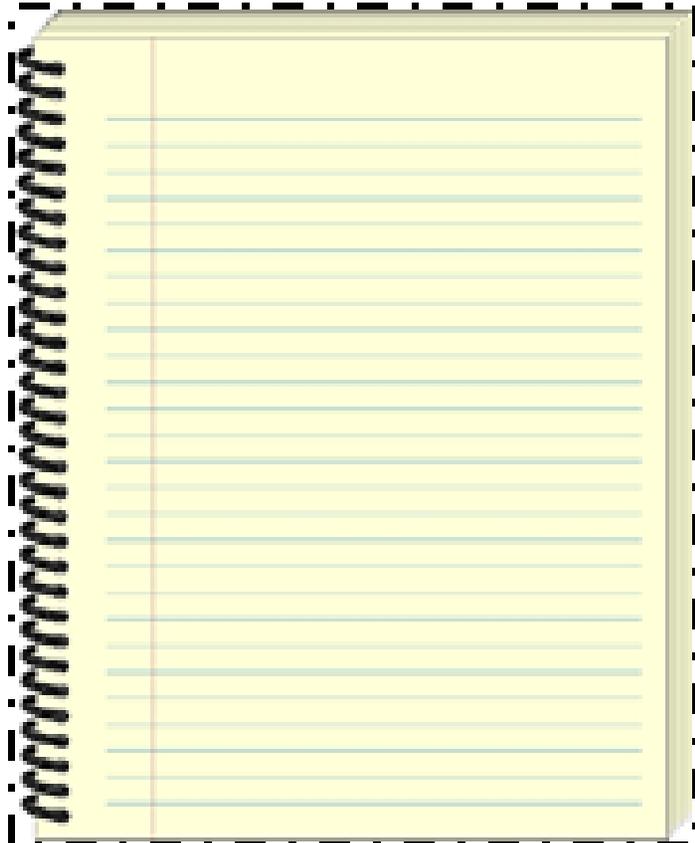
Which is longer? Circle It.

Scissors	Paper
Glue	Scissors
CD	Chalkboard
Scissors	Pencil
Crayons	Paper
Scissors	Glue
Chalkboard	Pencil

School Pictures (Cut -out) K.MD.1



School Pictures (Cut -out) K.MD.1



What Can You Measure Assessment K.MD.1





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Measurement and Data	Cluster: Describe and compare measurable attributes.
	Standard 2: Directly compare two objects with a measurable attribute in common, to see which object has "more of" / "less of" the attribute, and describe the difference. For example directly compare the heights of two children and describe one child as taller/shorter.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
2 Minutes	Taller than: longer. Shorter than: smaller. Same as: equal.	
	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	Materials you will need:	
	<ul style="list-style-type: none"> • Paper bag • 20 interlocking cubes • Crayon • Key Academic Vocabulary Card (K.MD.1) 	
	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> • Show the child a crayon. Ask him/her to find something in the classroom that is the same height as the crayon. Ask the child to find something that is taller than the crayon. Direct the student to finding something that is shorter than the crayon. • Choose two more objects and, one at a time, have the students find something that is taller, shorter, or the same height. 	
	2. Introduce and review Key Academic Mathematics Vocabulary.	
	<ul style="list-style-type: none"> • Show the student the Vocabulary Card (K.MD.1). Compare yourself to the student. Say, "I am taller than you. You are shorter than me. We are not equal size." 	
8 Minutes	INSTRUCT—Provide Explicit, Interactive Instruction	
	3. State the objective.	
	<ul style="list-style-type: none"> • Say, "Today, we are going to compare two objects to see which object is taller and which object is shorter." 	
	4. Provide explicit, step-by-step instructions.	
	<ul style="list-style-type: none"> • Put 20 interlocking cubes inside the paper bag. Reach inside the paper bag and pull out a handful of cubes. Snap the cubes together and stand them up. Instruct the student to reach in the bag and pull out a handful of cubes. Direct him/her to snap his/her cubes together and stand them up. • Place the cube towers side by side. Use words "taller than," "shorter than" and "the same as" to compare the towers. • Say, "My tower is _____ than yours. Your tower is _____ than mine." • Use the sentence frame to help student share his/her thinking. 	
	5. Model.	
<ul style="list-style-type: none"> • Repeat activity several times. 		
6. Check for understanding (work problem with student).		
<ul style="list-style-type: none"> • Take a handful of cubes from the bag and snap them together. • Instruct the student to reach in the bag and pull out a handful of cubes. Direct him/her to snap his/her 		

cubes together and stand them up.

- Place the cube towers side by side. Use words “taller than,” “shorter than” and “the same as” to compare the towers.
- Break down the larger tower until it is smaller than the other tower. Then, have the student compare again.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Now, instead of standing the towers up, lay them down and compare them.
- Repeat many times.
- Say, “Now, let’s build towers that are the same height.” Build a tower and have the student build one the same height.

ASSESS—Evaluate Student Demonstration

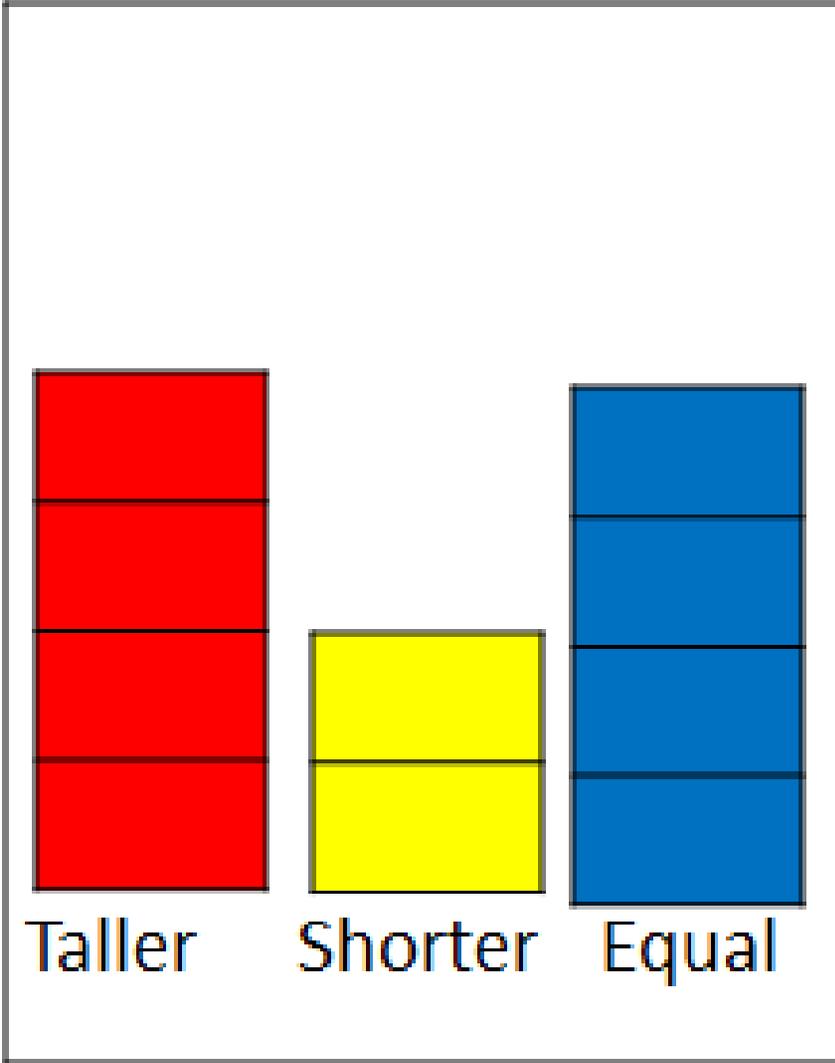
8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

- Make two towers of different height. Ask the student which is taller/shorter and how he/she knows. Have him/her say it in two complete sentences.

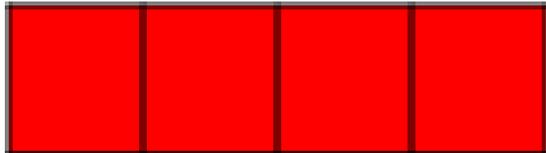
5 Minutes

5 Minutes

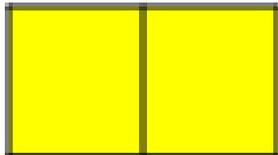
K.MD.1
Key Academic Math Vocabulary Card



Taller



Shorter



Equal



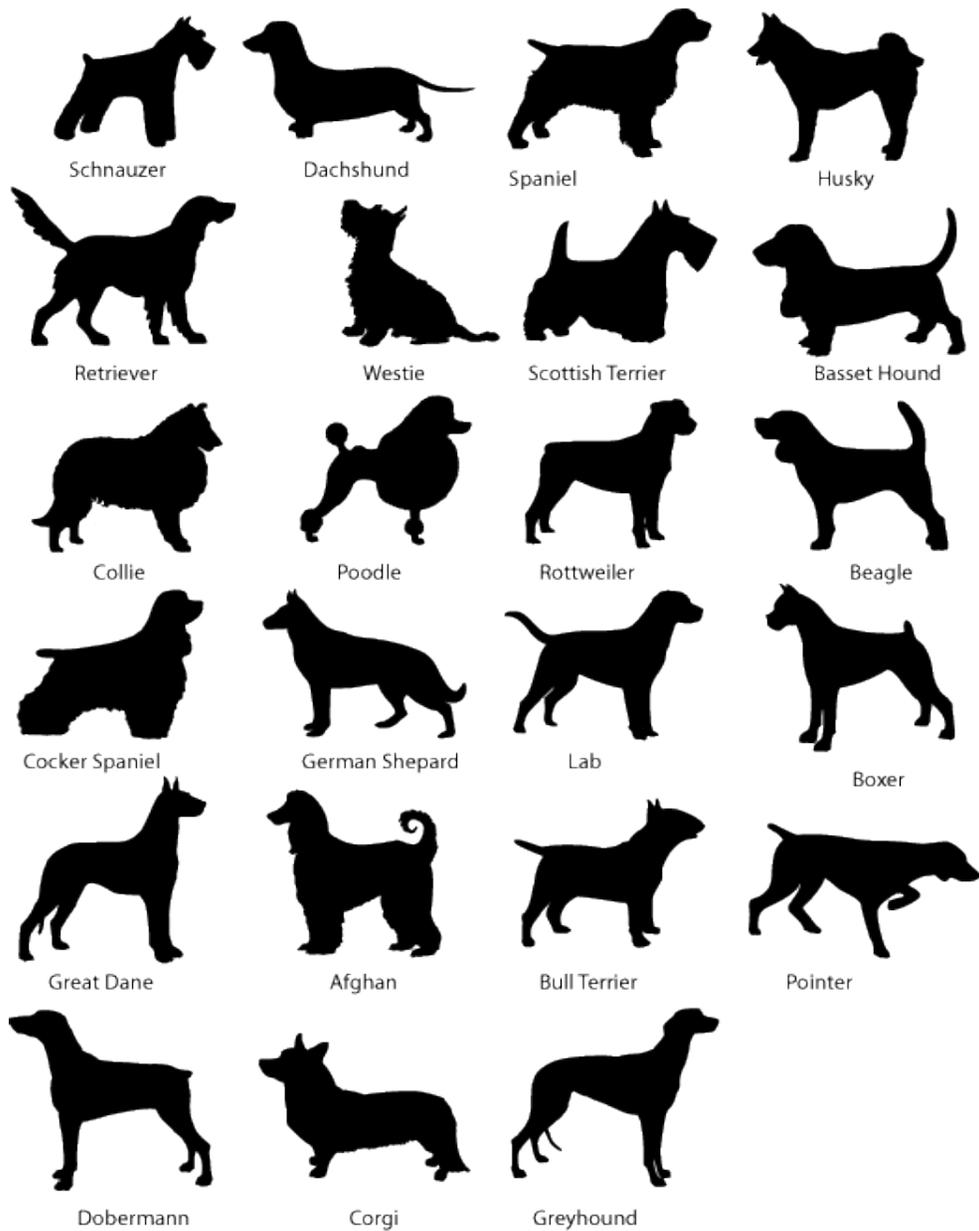


Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Measurement and Data	Cluster: Classify objects and count the number of objects in each category.
	Standard: 3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson: <ul style="list-style-type: none"> Cut out Classifying Animal Cards (K.MD.1) and Playing Pictures (K.MD.1) prior to the lesson and paperclip each different page together. 	
8 Minutes	Materials you will need:	
	<ul style="list-style-type: none"> Looking at Dogs (K.MD.1) Dinner Time (K.MD.1) Classifying Animal Cards (K.MD.1) Animal Home Sorting Chart (K.MD.1) The Way Animals Move Sorting Card (K.MD.1) Sorting Chart (K.MD.1) Legs Sorting Chart (K.MD.1) Playing Pictures (K.MD.1) 	
	LAUNCH—Assess and Provide Background Knowledge	
	<ol style="list-style-type: none"> 1. Connect to prior learning. Use a "hook" to gain the student's attention. <ul style="list-style-type: none"> “Have you ever seen a dog? Describe it. Have you ever seen a dog that looks different than that dog? Describe it. There are many different kinds of dogs. Let’s look at the Looking at Dogs sheet K.MD.1 What are some things are different dogs have? (Short hair, long hair, long tails, short tails, different colored fur, etc.) What are some things that ALL dogs have? (Four legs, fur, wet nose, bark, etc.) When we look at how objects are the same and different, it makes it easier to classify them. We are going to classify different objects today.” 	
INSTRUCT—Provide Explicit, Interactive Instruction		
<ol style="list-style-type: none"> 3. State the objective. Say, “Today, we are going classify different objects and count how many objects we have in each group.” 		
<ol style="list-style-type: none"> 4. Provide explicit, step-by-step instructions. <ul style="list-style-type: none"> Say, “Let’s think about at dinner time. We used cups, plates, bowls, spoons, knives, and forks.” Show Dinner Time (K.MD.1). Say, “Look at how I can classify these objects. First, I will put all the things I used to eat with together: spoons, knives, and forks. Then I will put together all of the things I put food on or in: bowls, cups and plates. I have two different classifications. I have what I eat with and what I put food on or in. I am going to count how many I have in each category. I have four in the category of things I eat with. Help me count how many things are in the category of what I put food on or in.” (13.) 		
<ol style="list-style-type: none"> 5. Model. <ul style="list-style-type: none"> Say, “Now we are going to classify animals into different groups. First, I want to classify them by where they live—in the jungle or on a farm.” Take the animals and classify them on the Animal Home Sorting 		

5 Minutes	Chart (K.MD.1). Assist the student when needed. Say, “Now, let’s find out how many are in each category by counting them.”
	<p>6. Check for understanding (work problem with student).</p> <ul style="list-style-type: none"> Ask the student to classify the same animals now by whether they walk or fly (using The Way Animals Move Sorting Card [K.MD.1]). Say, “Now, let’s find out how many are in each category by counting them.”
	GUIDED PRACTICE—Monitor Student Work
5 Minutes	<p>7. Student works problems independently while tutor watches and coaches.</p> <ul style="list-style-type: none"> Say, “Look at the animals. Is there another way I could classify them into two groups using the Sorting Chart (K.MD.1)?” If the student cannot come up with a way to classify, offer some of the following ideas: size, scariness, how fast they can move, whether they are found in the zoo, etc. Classify them into groups and then count how many are in each group. Say, “Now, I want to look at some different Playing Pictures (K.MD.1) and see if we can figure out some way to classify these pictures into two groups and count how many are in each group.” (Things you can bounce, things to play on, toys to play with, large toys, small toys, etc.)
	ASSESS—Evaluate Student Demonstration
	<p>8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.</p> <ul style="list-style-type: none"> “Now, let’s classify them by how many legs they have using Legs Sorting Chart (K.MD.1). Let’s find out how many are in each category by counting them.”

DogsK.MD.1



Dinner Time K.MD.1



Classifying Animal Cards (Cut-out) K.MD.1

Lion



Zebra



Parrot



Tarantula



Cow



Horse



Crow



Spider



Animal Home Sorting Chart K.MD.1

Jungle Animals



Farm Animals



The Way Animals Move Sorting Chart K.MD.1

Walks



Flies



Sorting Chart K.MD.1

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Sorting Chart K.MD.1

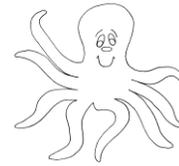
4 legs



2 legs

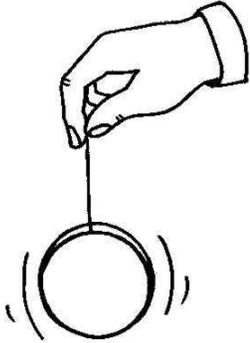


8 legs



Playing Pictures K.MD.1

Yo-Yo



Jump rope



Basketball



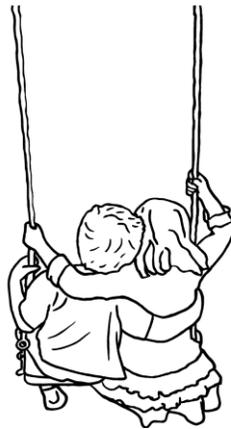
Baseball



Slide



Swing



Soccer ball



Monkey
Bars





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Geometry	Cluster: Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
	Standard 1: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Shapes: squares, circles, triangles, rectangles, hexagons. Positions: above, below, beside, in front of, behind, and next to.	
2 Minutes	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> It is important that the student uses Academic Mathematics Vocabulary (for example, "The large rectangle is behind the house," etc.). Shapes (K.G.1) should be cut out to use with student. 	
	Materials you will need:	
	<ul style="list-style-type: none"> I Spy (K.G.1) Geometry Academic Vocabulary Card (K.G.1) Bedroom Scene (K.G.1) House Scene (K.G.1) 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention. <ul style="list-style-type: none"> Say, "We are going to play 'I Spy.' This is a game where you are going to examine things closely." Say, "Look closely at this page. Please find a small airplane." (Student points out airplane.) "Now find a sea star." (Student points out sea star.) Continue with the sea horse and horse. Have the student choose something for you to find. 	
	2. Introduce and review Key Academic Mathematics Vocabulary. <ul style="list-style-type: none"> Using Geometry Academic Vocabulary Cards write each vocabulary word in a complete sentence such as: This is a triangle or the mouse is beside the cheese. 	
INSTRUCT—Provide Explicit, Interactive Instruction		
3. State the objective. Say, "Today, we are going to name shapes, and you will tell me where the dog is located."		
4. Provide explicit step-by-step instructions. <ul style="list-style-type: none"> Lay the cut-out shapes on the table. Say, "We are going to put the dog in different locations and describe each location." Say, "I'm putting the dog." Put the dog above the triangle. Say, "The dog is above the triangle. Now, you say it." Say, "I'm putting the dog below the small rectangle." Put the dog below the small rectangle. Say, "The dog is below the small rectangle. Now you say it." Continue on with these directions and have the student repeat where the dog is. <ul style="list-style-type: none"> dog beside the large square dog in front of the hexagon dog behind the large rectangle dog next to the big square 		
5. Model.		

Say, "Now, you put the dog in these locations. Put the dog above the triangle." (Student places dog.) "Now, tell me where the dog is." The student should say, "The dog is above the triangle."

- dog below the small rectangle
- dog beside the large square
- dog in front of the hexagon
- dog behind the large rectangle
- dog next to the big square

6. Check for understanding (work problem with student).

- Student works problems independently while tutor watches and coaches.
- Show the student the Bedroom Scene. Put the dog on the bed. Ask "Where is the dog?" Student should say, "The dog is on the bed."
- Change the position of the dog and ask the student where it is in the bedroom scene
- Use the words *above, below, beside, in front of, behind, and next to*.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Show the student the house scene. Change the position of the dog and ask questions. Use the words *above, below, beside, in front of, behind, and next to*.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.

9. Student works a problem while explaining EVERY step orally.

- Have the student put the dog somewhere on the picture and explain where it is.
- Ask the student to place the dog in the correct position in the house or bedroom scene, whichever one interested the student the most.
- Say, "Put the dog below the _____. Tell me, where is the dog?"
- Continue with other locations, always asking the student to describe the location in a complete sentence.
 - "Put the dog above the _____."
 - "Put the dog beside the _____."
 - "Put the dog beside the _____."
- Continue with *in front of, behind, and next to*.

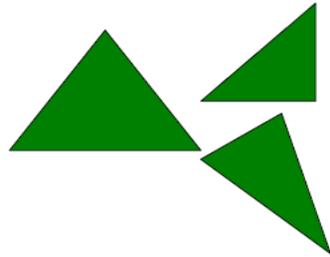
5 Minutes

5 Minutes

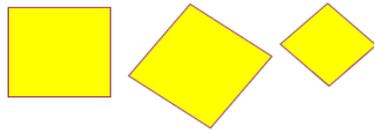
K.G.1

Key Academic Math Vocabulary Card

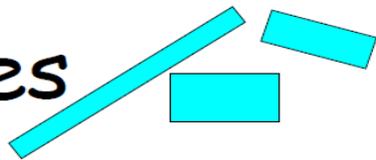
triangles



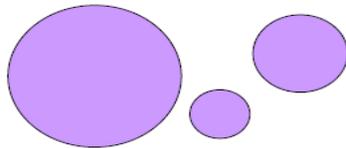
squares



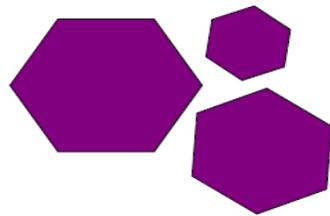
rectangles



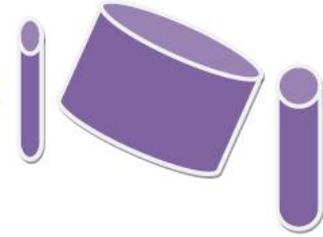
circles



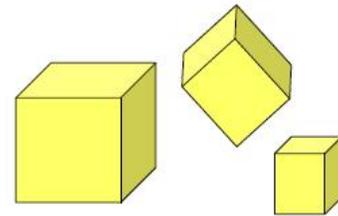
hexagons



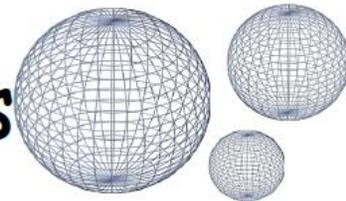
cylinders



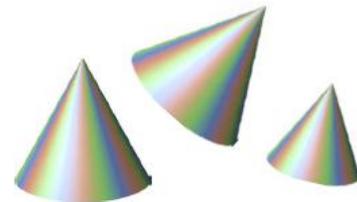
cubes



spheres



cone



K.G.1

Key Academic Math Vocabulary Card

between   

above



by



on



below



over



in



near



under



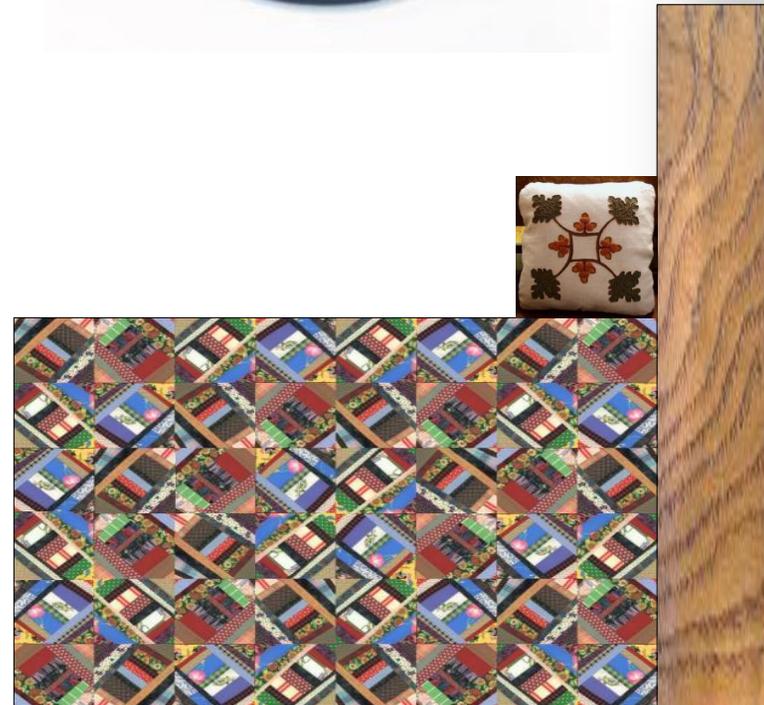
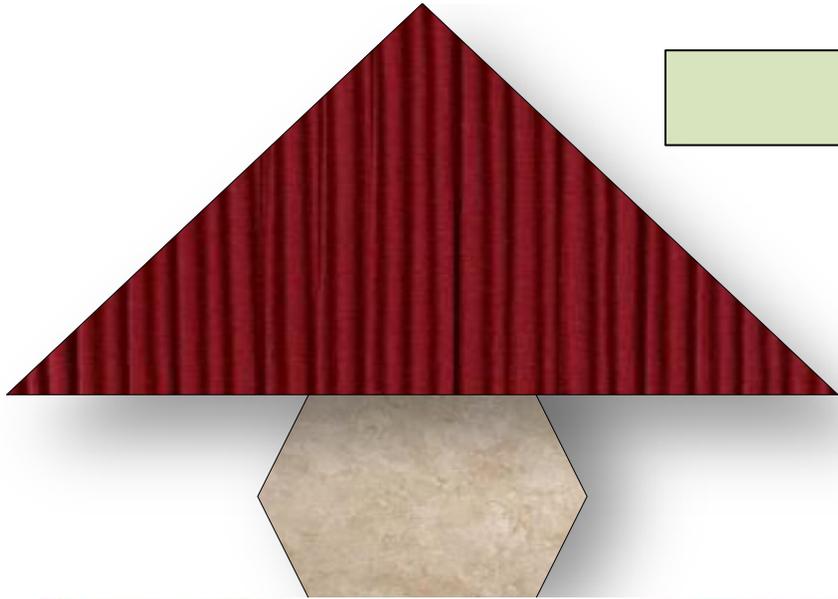
next to



far



K.G.1 Bedroom Scene



K.G.1 House Scene





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Geometry	Cluster: Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
	Standard 2: Correctly name shapes regardless of their orientation or overall size.	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Shapes: squares, circles, triangles, rectangles, hexagons.	
	Notes and Materials	
2 Minutes	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> Have the Geometry Shape Cards (K.G.2) cut out prior to the lesson. Be sure to focus on the fact that no matter how you rotate the shape, it stays the same. 	
	Materials you will need:	
	<ul style="list-style-type: none"> Geometry Shape Cards (K.G.2) Geometry Key Academic Vocabulary Cards (K.G.1) 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> Show the student a circle, a rectangle and a square shape card. Have him/her quickly scan his/her environment to find an object in with the same shape. For example, a rectangle could be a ceiling tile or a door. Note: A ball is NOT a circle. The rim of a trash can could be a circle, or the face of a clock. 	
2. Introduce and review Key Academic Mathematics Vocabulary.		
<ul style="list-style-type: none"> Explicitly review shape vocabulary, using the geometry shape cards: square, triangle, rectangle, circle, and hexagon. Say, "This is a triangle." Have the student repeat, "This is a triangle." Repeat with other shapes. 		
INSTRUCT—Provide Explicit, Interactive Instruction		
3. State the objective.		
Say, "Today, we are going to identify shapes by the number of sides and numbers of corners."		
4. Provide explicit, step-by-step instructions.		
<ul style="list-style-type: none"> Hold the one of the triangle shape cards. Say, "Let's look at the triangle. How many sides does it have?" (Three.) "How many corners?" (Three.) "Watch—I am going to turn the shape." Turn the shape 90 degrees. "Look—it is still a triangle, even if I turn it, because it has three sides and three corners." Turn the shape another 45 degrees. "What shape is it? Right. It is still a triangle because it has three sides and three corners." Do the same thing with a square. "Let's look at the square. How many sides does it have?" (Four.) "Are the sides the same length?" (Yes.) "How many corners?" (Four.) "Watch—I am going to turn the shape." Turn the shape 90 degrees. "Look—it is still a square, even if I turn it, because it has four equal sides and four corners." Turn the shape another 45 degrees. "What shape is it? Right. It is still a square, even if I turn it, because it has four equal sides and 4 corners." Be sure to focus on the fact that matter how you rotate the shape, it stays the same. DO the same thing with the circle. It has zero sides and zero corners. Do the same thing with the hexagon. It has six sides and six corners. Do the same thing with the rectangle. It has four sides—two long and two short—and four corners. 		

5. Model.

- Show the student a shape. “This is a rectangle.” Now, rotate the shape 45 degrees. “What shape is it now? “This is a rectangle. “Rotate the shape 180 degrees. What shape is it now?”
- Repeat with the circle, square, triangle, and hexagon.

6. Check for understanding (work problem with student).

- Show a square, then ask, “How do you know it is a square?” (It has four equal sides, or it has four corners.)
- Repeat with a triangle. “How do you know it is a triangle?” (It has three sides, or it has three corners.)
- Repeat with a rectangle. “How do you know it is a rectangle?” (It has four sides, or it has four corners.)
- Repeat with a hexagon. “How do you know it is a hexagon?” (It has six sides, or it has six corners.)
- Repeat with a circle. “How do you know it is a circle?” (It has no sides, or it has no corners. It is round.)

GUIDED PRACTICE—Monitor Student Work**7. Student works problems independently while tutor watches and coaches.**

- “We are going to sort the shapes into separate categories. We are going to sort the shapes by the number of sides: zero, three, four, and six. Can you find all the shapes with zero sides? Three sides? Four sides? Six sides?”
- “Now, we are going to sort the shapes by the number of corners: zero, three, four, and six.”
- “Now, we are going to sort the shapes by name. Show me all the triangles.”
- Continue with hexagons, circles, squares, and rectangles. Assist the student with examining each shape to determine its name.

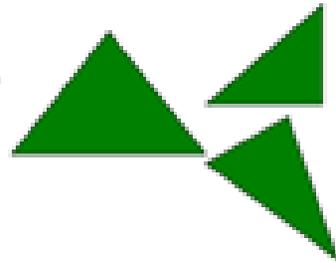
ASSESS—Evaluate Student Demonstration**8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.**

- Show the student a shape. Ask the name of the shape and have the student explain how he/she knows what shape that is, either by looking at the sides or corners.
- Pick up a square and rotate it. Ask, “What shape is this?” Rotate again; ask “What shape is this? How do you know?”

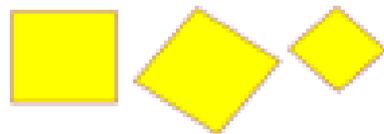
K.G.1

Key Academic Math Vocabulary Card

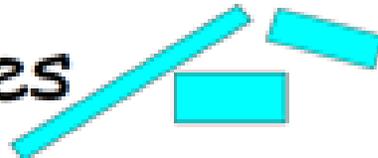
triangles



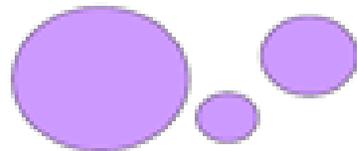
squares



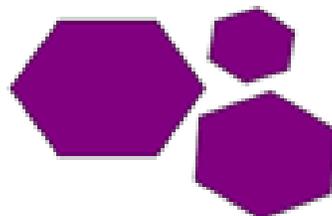
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circles



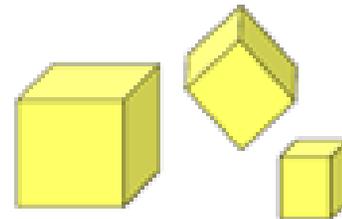
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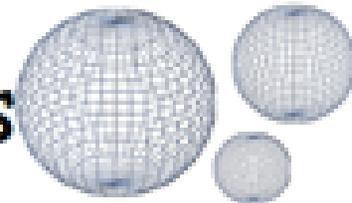
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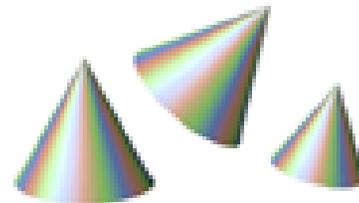
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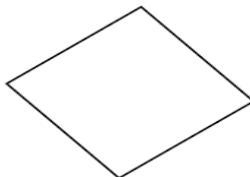
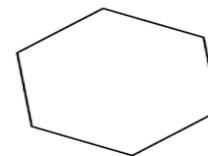
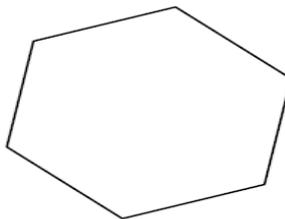
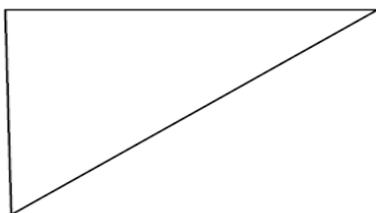
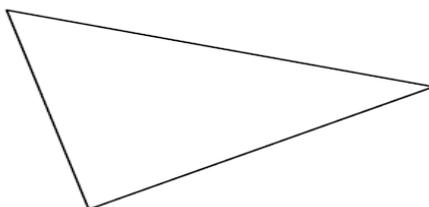
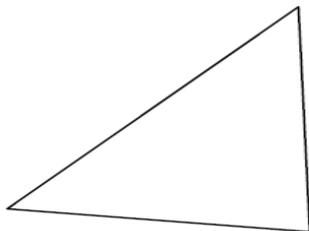
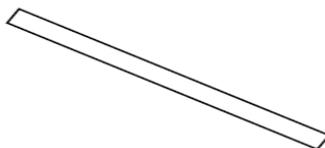
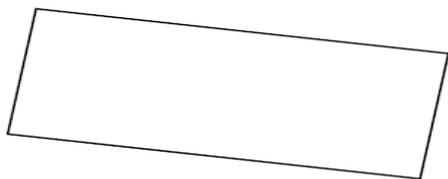
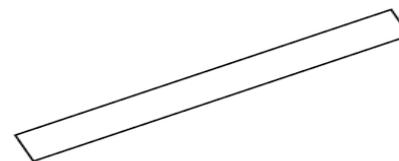
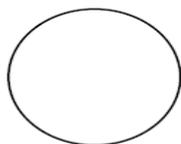
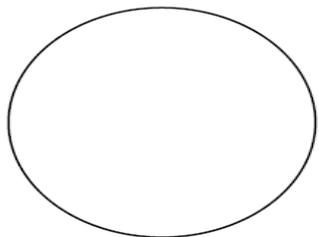
spheres



cone



K.G.2 Shape Cards





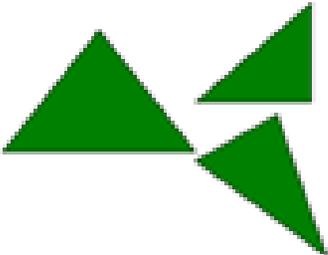
Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Geometry	Cluster: Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
	Standard 3: Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	
	Key Academic Mathematics Vocabulary (3 or fewer)	
2 Minutes	Two-dimensional: flat. Three-dimensional: solid.	
	Notes and Materials	
	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> • This lesson requires that the following materials be gathered prior to the lesson. <ul style="list-style-type: none"> - A variety of three-dimensional objects (i.e., water bottle, tissue box, paper towel, piece of paper, book, and crayon) - A variety of two-dimensional objects (i.e., paper, pattern blocks, shape cards) - Paper sack (to place objects in) 	
8 Minutes	Materials you will need:	
	<ul style="list-style-type: none"> • Three-dimensional objects • Two-dimensional objects • Geometry Shape Cards (K.G.3) • Geometry Key Academic Mathematics Vocabulary Card (K.G.1) 	
	LAUNCH—Assess and Provide Background Knowledge	
	<p>1. Connect to prior learning. Use a "hook" to gain the student's attention.</p> <ul style="list-style-type: none"> • Gather a variety of objects: water bottle, tissue box, paper towel, piece of paper, book, crayon, and scissors. • Hold up a piece of paper and say, "This is two-dimensional because it is flat." Place it on one side of the table. • Pick up a crayon and say, "This is three-dimensional because it is solid." Put it on the other side of the table. Continue sorting the objects and explaining to the student whether each is two-dimensional or three-dimensional. 	
<p>2. Introduce and review Key Academic Mathematics Vocabulary.</p> <ul style="list-style-type: none"> • When the objects have been sorted, ask the student which group contains the two-dimensional objects and which has the three-dimensional objects. Ask him/her how he/she knows. Review the Key Academic Mathematics Vocabulary Card (K.G.1) with the student. 		
INSTRUCT—Provide Explicit, Interactive Instruction		
<p>3. State the objective. Say, "Today, we will identify shapes as either two-dimensional (flat) or three-dimensional (solid)."</p>		
<p>4. Provide explicit step-by-step instructions.</p> <ul style="list-style-type: none"> • Say, "Today we will play a game called Race to the Top. We are going sort objects into two groups using a graph." • Reach inside the bag, pull out one object, and decide whether it needs to go in the two-dimensional or three-dimensional column. Explain the reasoning for the placement of the objects. 		
<p>5. Model.</p>		

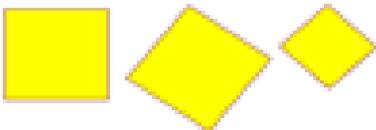
5 Minutes	<ul style="list-style-type: none"> Have the student verbally explain why he/she placed an object in a particular column, using the sentence frame: "A _____ is (three-dimensional/two dimensional) because it is (solid/flat).
	<p>6. Check for understanding (work problem with student).</p> <ul style="list-style-type: none"> Choose an object, and ask the student why it is placed in a certain column. Assist the student in explaining his/her answer if needed.
5 Minutes	<p>GUIDED PRACTICE—Monitor Student Work</p>
	<p>7. Student works problems independently while tutor watches and coaches.</p> <ul style="list-style-type: none"> The student will play the game and explain to the tutor his/her reasoning.
	<p>ASSESS—Evaluate Student Demonstration</p>
5 Minutes	<p>8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.</p> <ul style="list-style-type: none"> Observe the student playing the game. Ask clarifying questions when needed. Ask, "Can you think of a two-dimensional object in your classroom? Can you think of a three-dimensional object in your classroom?" What about objects in your house? Which are two-dimensional and which are three-dimensional?
	<p>9. Student works a problem while explaining EVERY step orally.</p> <ul style="list-style-type: none"> Mix the objects from the beginning of the lesson together and then have the student sort them into groups by himself/herself and explain his/her reasoning.

K.G.1
Key Academic Math Vocabulary Card

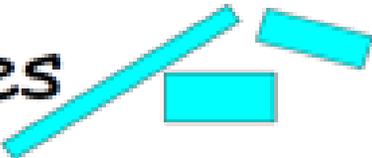
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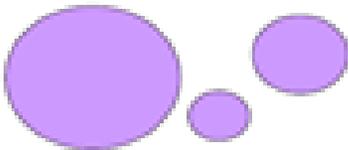
squares



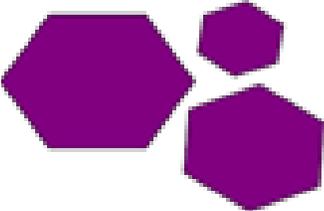
rectangles



circles



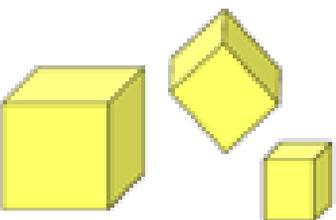
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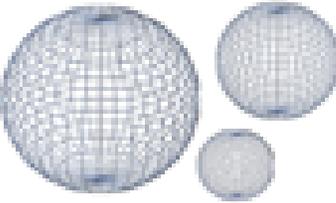
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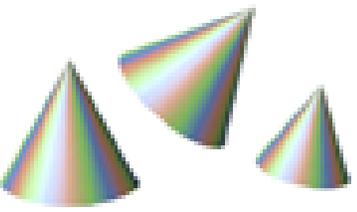
cubes



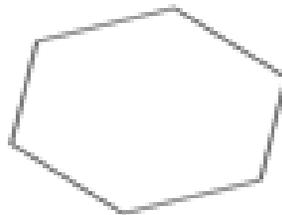
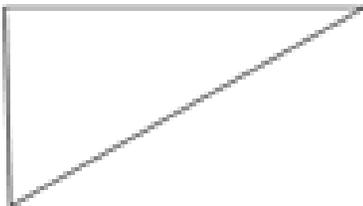
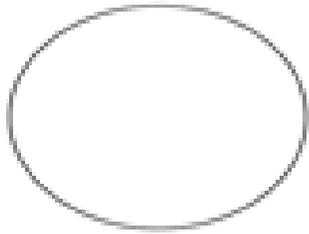
spheres



cone



K.G.2 Shape Cards





Mathematics Tutoring Session Template

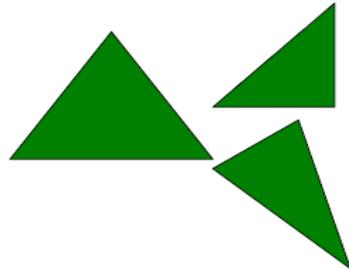
Before You Begin	Common Core Identification	
	Domain: Geometry	Cluster: Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
	Standard 4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informational language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Two-dimensional (flat): square, circle, triangle, rectangle, hexagon Three-dimensional (solid): cube, cone, cylinder, sphere,	
	Notes and Materials	
2 Minutes	Notes and suggestions for an effective lesson:	
	<ul style="list-style-type: none"> The lesson should be divided into two sessions—one session focusing on two-dimensional shapes and one lesson focusing on three-dimensional shapes. Review vocabulary before reviewing prior learning. 	
	Materials you will need:	
	<ul style="list-style-type: none"> Geometry Shape Cards (K.G.2) Key Academic Mathematics Vocabulary Card (K.G.1) Physical models of different sizes of cubes, cones, cylinders, and spheres, paper sacks. (If not available, gather items with these shapes—i.e. cube/die, cone/ice cream cone or birthday hat, cylinder/pop can, and sphere/globe.) 	
8 Minutes	LAUNCH—Assess and Provide Background Knowledge	
	1. Connect to prior learning. Use a "hook" to gain the student's attention.	
	<ul style="list-style-type: none"> Say, "Look around the room and quickly count how many squares you can see. How many circles? Can you find any triangles? How many rectangles can you see? How many hexagons?" Say, "Look around the room and quickly count how many cubes you can see. How many cones can you see? Can you name any cylinders? How many spheres can you count?" 	
INSTRUCT—Provide Explicit, Interactive Instruction		
2. Introduce and review Key Academic Mathematics Vocabulary.		
<ul style="list-style-type: none"> Key Academic Mathematics Vocabulary cards for two-dimensional shapes. <ul style="list-style-type: none"> Cube – Student should be holding a three-dimensional object in his/her hand, rubbing fingers over parts being defined—eight vertices (points or corners), six faces (flat parts), 12 edges. Cone – one vertex (point), one face Cylinder – two faces Sphere – zero faces, zero vertices 		
3. State the objective.		
Student will be able to correctly name the two- or three-dimensional (solid) shapes no matter their size or how they are placed.		
4. Provide explicit, step-by-step instructions.		
<ul style="list-style-type: none"> Have two-dimensional shape cards arranged on table in different orientations. Pick up a square and hand it to the student. Say, "This is a square. How many sides does it have? How many corners? Can you find other squares on the table?" Repeat with other 2-D shapes. Have three-dimensional shapes arranged on table in different orientations. Pick up a cube and hand it to the student. 		

	<ul style="list-style-type: none"> • Say, “This is a cube. How many edges does it have? How many corners? How many faces? Can you find other cubes?” Repeat steps with other three-dimensional shapes.
	<p>5. Model.</p> <ul style="list-style-type: none"> • Play the game again, but have the student arrange shapes on table and give instructions to the tutor to find a specific shape. (Make a mistake so the student has to correct you using correct mathematics vocabulary.)
	<p>6. Check for understanding (work problem with student).</p> <ul style="list-style-type: none"> • Lay out all the shapes and then describe them. The student tries to guess which ones you are talking about. • Say, “I am thinking of a shape with four sides and four corners. The sides are all the same size. What is it?” • List the attributes of another shape and have the student guess which shape it is.
5 Minutes	<p>GUIDED PRACTICE—Monitor Student Work</p>
	<p>7. Student works problems independently while tutor watches and coaches. Have the student give the clues about the shape and ask what it is. Reply with the name of the shape. Assist when needed.</p>
	<p>ASSESS—Evaluate Student Demonstration</p>
5 Minutes	<p>8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept.</p> <ul style="list-style-type: none"> • Place two to four three-dimensional shapes into a paper bag. Have the student place hand in the bag and take hold of one shape. The student describes the shape, names it, and shows the tutor. This shape is then removed from bag. Continue with other shapes in bag until they are all gone and the student is able to name each shape.
	<p>9. Student works a problem while explaining EVERY step orally.</p> <ul style="list-style-type: none"> • You can use either the riddle activity or the paper bag activity to see if the student can name the shapes.

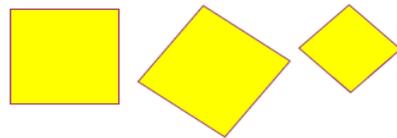
K.G.1

Key Academic Math Vocabulary Card

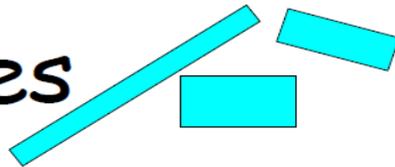
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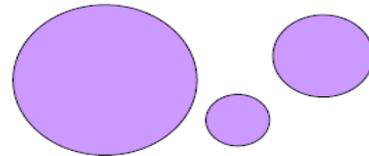
squares



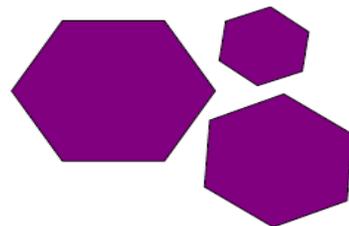
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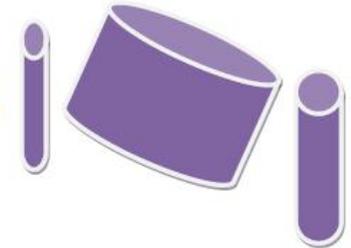
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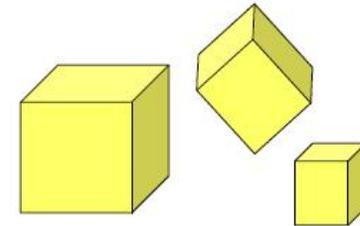
hexagons



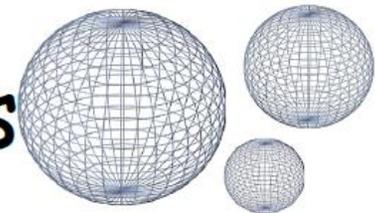
cylinders



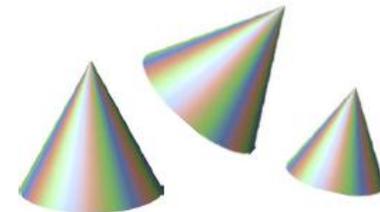
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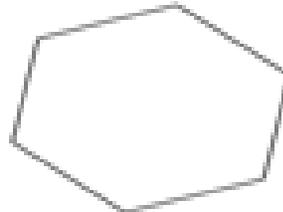
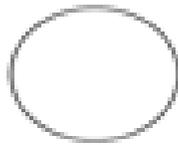
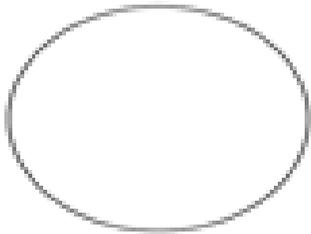
spheres



cone



K.G.2 Shape Cards





Mathematics Tutoring Session Template

Before You Begin	Common Core Identification	
	Domain: Geometry	Cluster: Analyze, compare, create, and compose shapes.
	Standard 4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	
	Key Academic Mathematics Vocabulary (3 or fewer)	
	Sides, vertices/corners, circle, square, hexagon, rectangle, triangle	
	Notes and Materials	
	Notes and suggestions for an effective lesson: Cut out Sorting Cards (K.G.4) prior to lesson.	
	Materials you will need:	
	<ul style="list-style-type: none"> • Shapes Cards (K.G.4) • Sorting Card: Sides (K.G.4) • Sorting Card: Corners/Vertices (K.G.4) • Pattern Blocks Puzzles Dog and Rocket (K.G.4) • Key Academic Mathematics Vocabulary Cards (K.G.4) • Key Academic Mathematics Vocabulary Cards (K.G.1) 	
	2 Minutes	LAUNCH—Assess and Provide Background Knowledge
1. Connect to prior learning. Use a "hook" to gain the student's attention.		
<ul style="list-style-type: none"> • Say, "Look at the pattern block picture. Can you find which shapes make this puzzle? Tell me the name of each shape as you put it on the puzzle." 		
2. Introduce and review Key Academic Mathematics Vocabulary.		
<ul style="list-style-type: none"> • Examine the Key Academic Mathematics Vocabulary Cards (K.G.1) and (K.G.4). Discuss where the side of the shape is by having the student slide his/her finger on the side of the pattern block shapes. Point out the vertices/corners. (Note: The terms <i>vertices</i> and <i>corners</i> can be used interchangeably.) Have the student count how many vertices are found on every different pattern block. Then have the student count how many sides are found on every different pattern block. 		
INSTRUCT—Provide Explicit, Interactive Instruction		
8 Minutes	3. State the objective.	
	Say, "Today we will be looking closely at shapes and their corners/vertices and sides."	
	4. Provide explicit, step-by-step instructions.	
	<ul style="list-style-type: none"> • Lay out the cut-out Shape Cards (K.G.4). • Say, "We are going to sort these shapes into groups. We are first going to sort the shapes by the number of sides they have. We will examine each shape and place it on our sorting chart. Let's look the categories on the sorting chart. There are zero, three, four, and six sides. Now, begin sorting." 	
5. Model.		
<ul style="list-style-type: none"> • Model how to examine a shape to find the number of sides by referring back to the pattern blocks and the Key Academic Mathematics Vocabulary Card. 		
6. Check for understanding (work problem with student).		
<ul style="list-style-type: none"> • Ask the student, "How many sides does this triangle have?" Then choose a different triangle and ask the same thing. Turn the triangles upside down. Ask again how many sides for both triangles. • The student needs to understand that all triangles have three sides, but they can look different. 		

5 Minutes

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Say, “Now, we are going to sort the shapes according to the number of vertices/corners. Model this first with a pattern block, and then have the student begin sorting. Ask the student why he/she chose to put a shape in a certain place on the chart.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

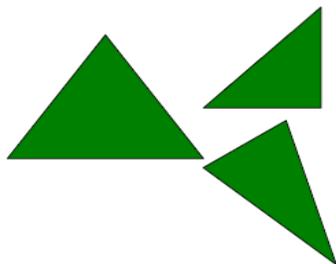
Have the student look at five different shapes and tell how many sides and vertices each shape has.

5 Minutes

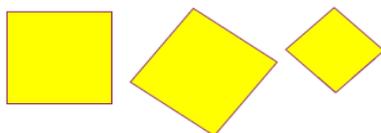
K.G.1

Key Academic Math Vocabulary Card

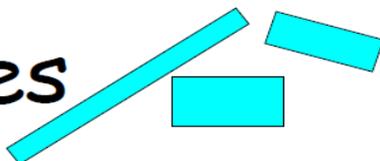
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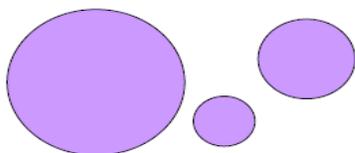
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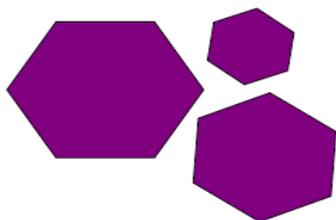
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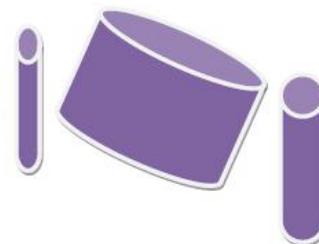
circles



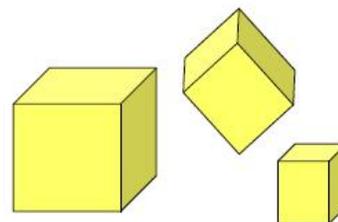
hexagons



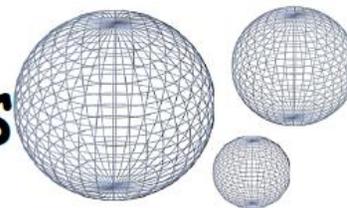
cylinders



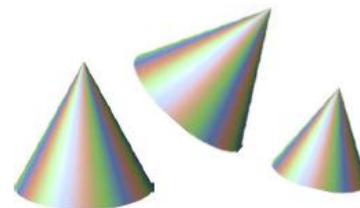
cubes



spheres



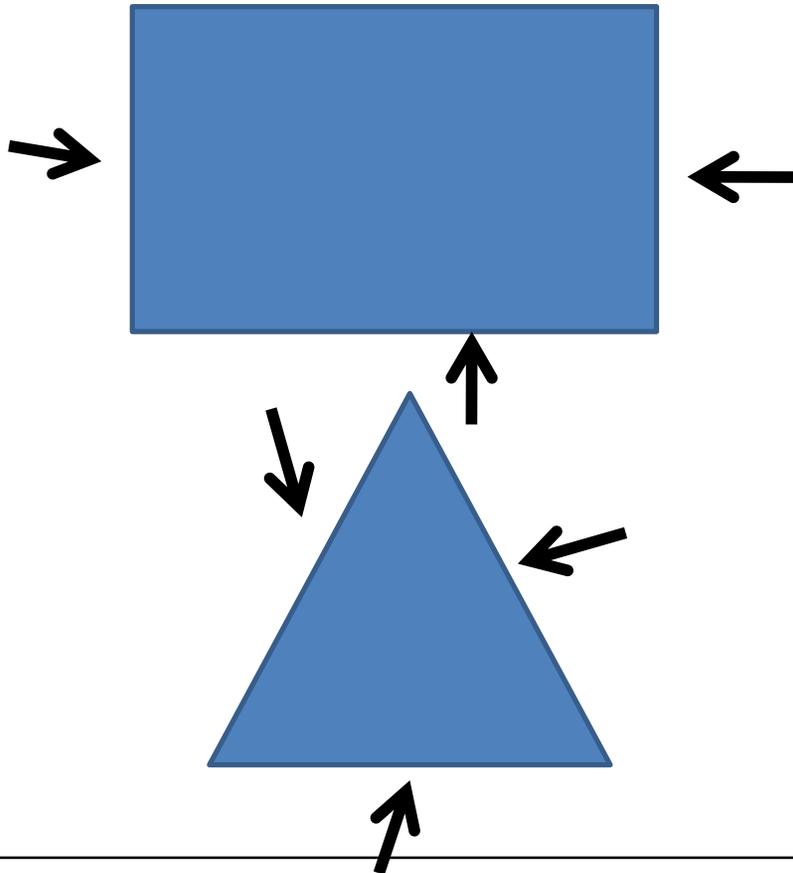
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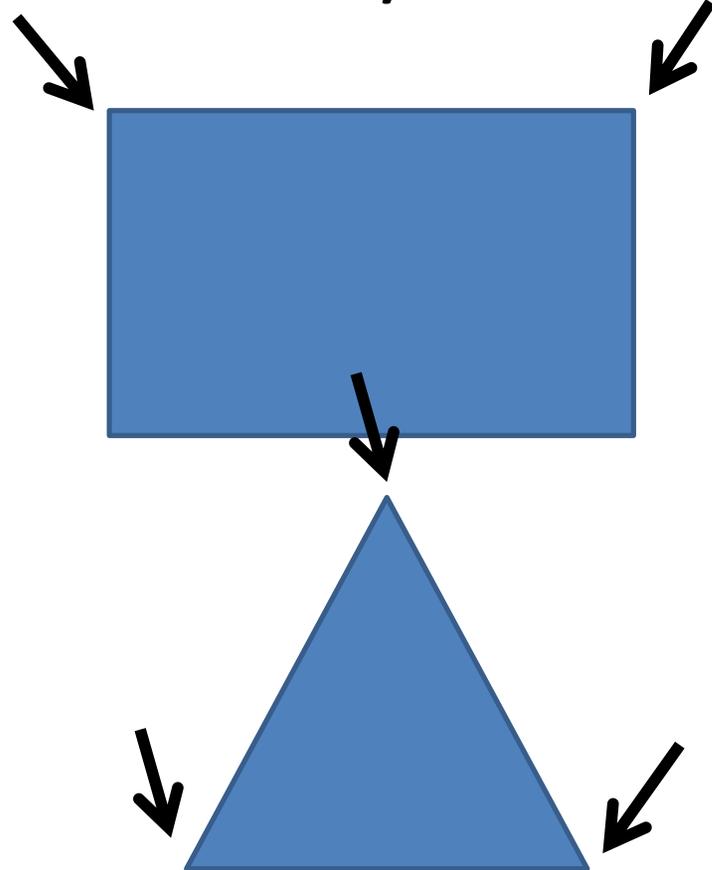
K.G.4

Key Academic Math Vocabulary Card

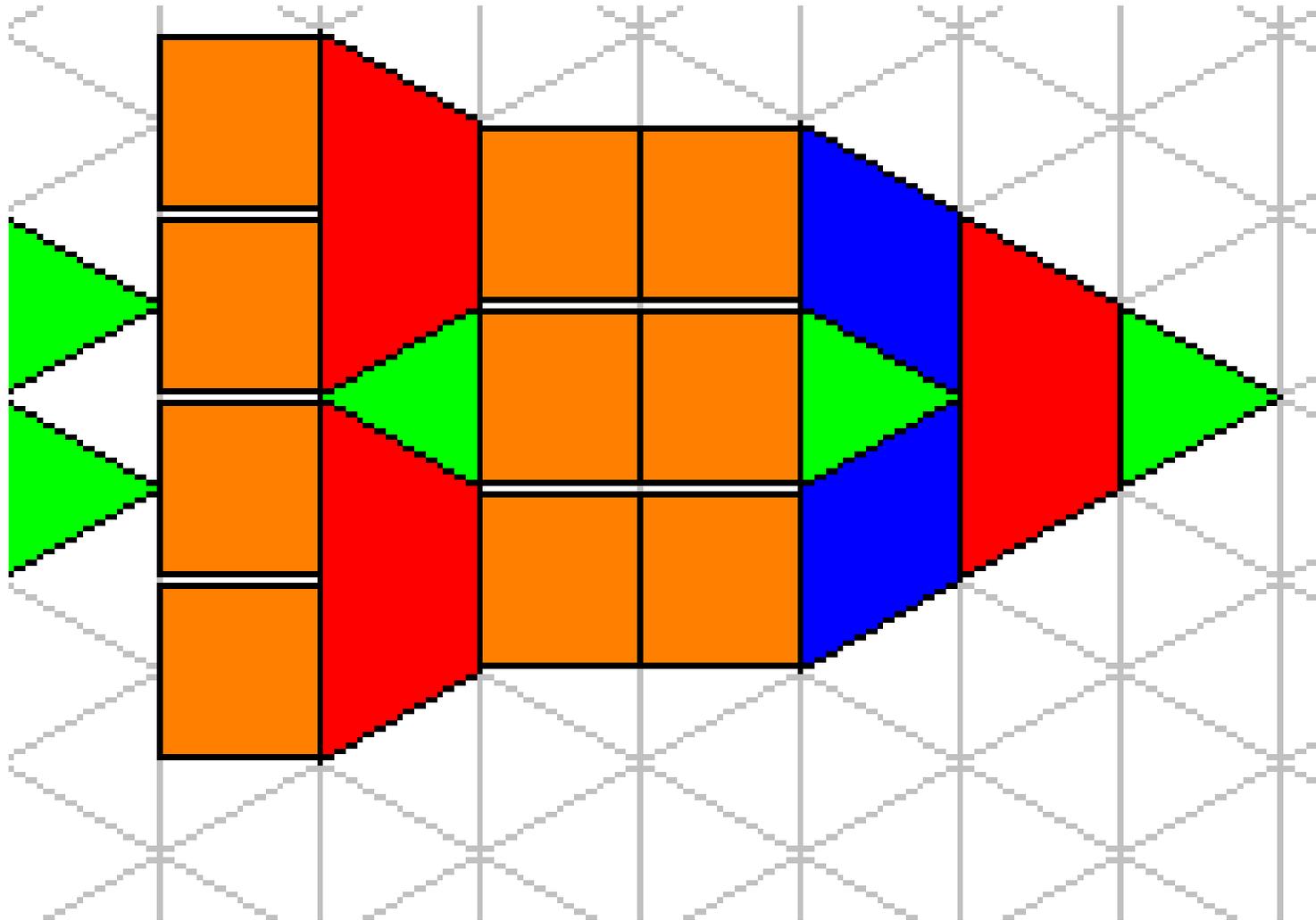
Side



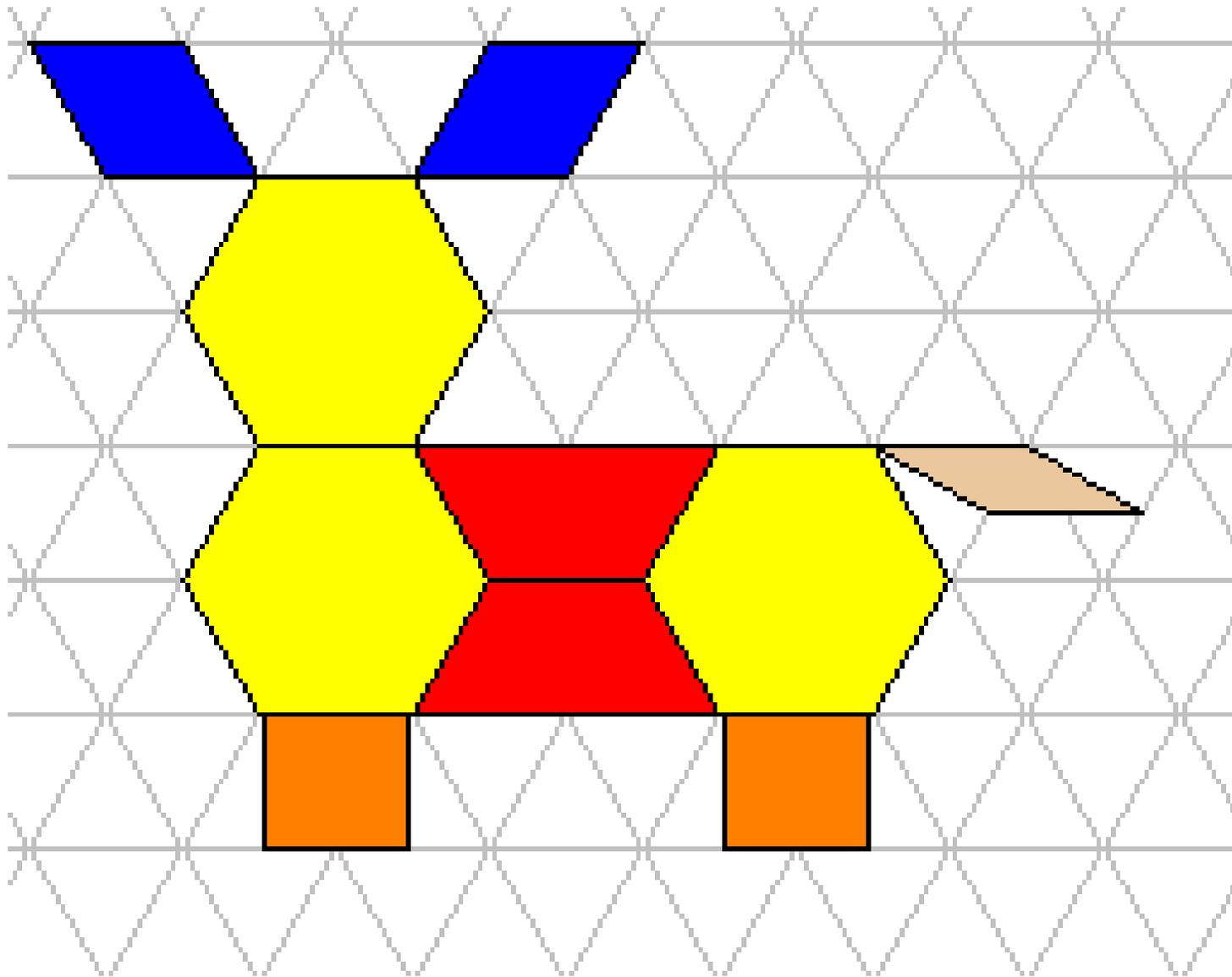
Vertices/corners



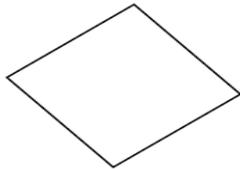
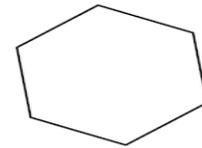
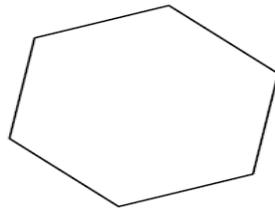
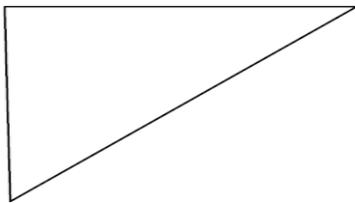
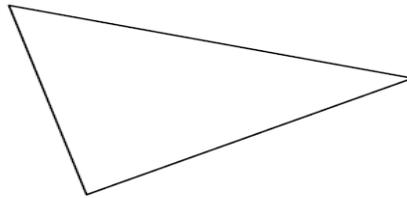
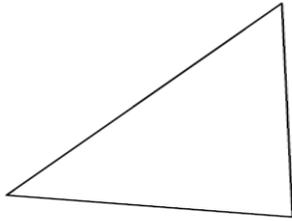
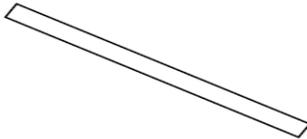
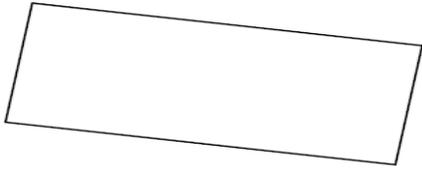
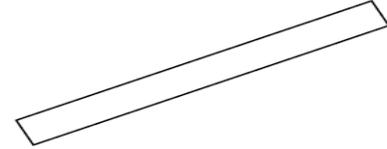
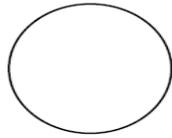
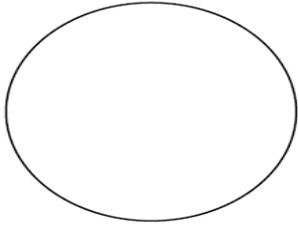
K.G.4 Pattern Block Puzzle ROCKET



K.G.4 Pattern Block Puzzles DOG



K.G.4 Shape Cards



K.G.4 Corner/Vertices Sorting Chart

0 corner

3 corners

4 corners

6 corners

K.G.4 Side Sorting Chart

0 sides

3 sides

4 sides

6 sides



Mathematics Tutoring Session Template

Before You Begin

Common Core Identification

Domain: Geometry

Cluster: Analyze, compare, create, and compose shapes.

Standard 5: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

Key Academic Mathematics Vocabulary (3 or fewer)

Notes and Materials

Notes and suggestions for an effective lesson:

- Cut out Shapes (K.G.5) prior to the lesson.

Materials you will need:

- Paper
- Pencil
- Shapes (K.G.5)
- Bedroom Scene (K.G.5)
- House Scene (K.G.5)
- Key Academic Vocabulary Card (K.G.5)

2 Minutes

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Say, "Let's look at this house (House Scene, K.G.5). Look at these shapes (Shapes, K.G.5). Can you find where they are in the picture? For example, the rectangle is a door. Say, 'The rectangle has the same shape as the door.'" Continue with each shape, having the student make a sentence for each one. "The _____ has the same shape as the _____."
- Remove all the shapes.
- Say, "Now, let's look in a bedroom" (Bedroom Scene K.G.5). Have the student make a sentence for each one. "The _____ has the same shape as the _____."

2. Introduce and review Key Academic Mathematics Vocabulary.

- Say, "Today we are going to draw our own pictures using shapes. We can use the following shapes; squares, circles, triangles, rectangles, hexagons, cube, cones, cylinders, and spheres."

8 Minutes

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

- Say, "Today, we are going to draw a picture with many different shapes."

4. Provide explicit, step-by-step instructions.

- Say, "We are going to draw our own house. Follow my directions. First we are going to draw a house using a rectangle and a triangle." Draws a rectangle (house). Say, "Draw a rectangle." The student draws a rectangle.
- Draw a triangle (roof). Say, "Draw a triangle." The student draws a triangle. Ask, "What did we draw using the rectangle and triangle?" The student replies, "We drew a house."

5. Model.

- Describe how to draw an object while the student draws.
- Examples:
 - Door/windows: Rectangles, squares, circles
 - Pine tree: triangle on top, square on bottom

- Other trees: circle on top of a tall rectangle.

6. Check for understanding (work problem with student).

- If the student is unable to draw a shape, hold that shape up for the student to see. Have the student trace the shape if necessary. Use the Key Academic Mathematics Vocabulary Card (K.G.5) to assist with drawing.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Continue enhancing the picture.
 - Sun/moon: Circle or crescent in the sky
 - Flowers: Circle on top, triangles/semicircles for petals/leaves
 - Cat: Circle for face and body, triangle for ears

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

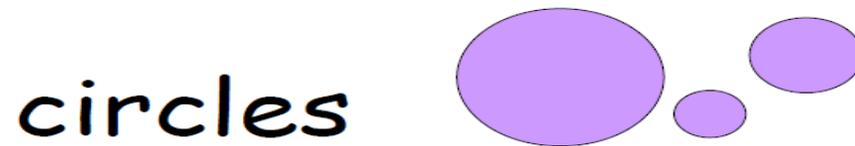
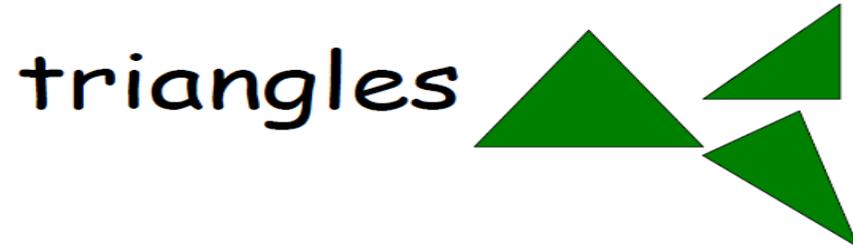
- Ask the student, “Which shapes did you use to draw the _____”
- Say, “Draw an ice cream cone using a circle and a triangle.”

5 Minutes

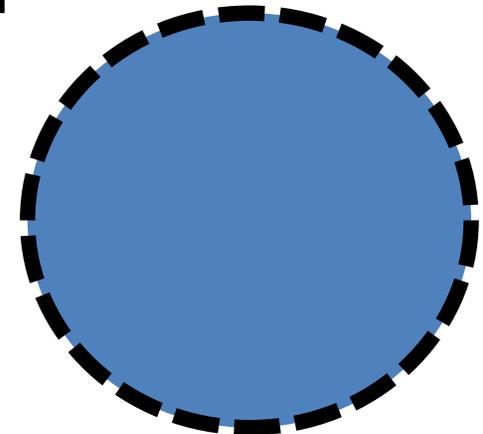
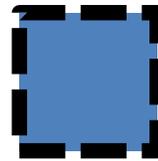
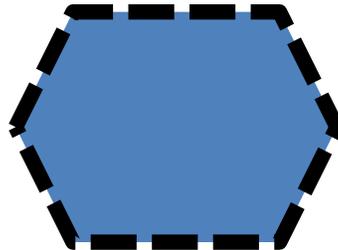
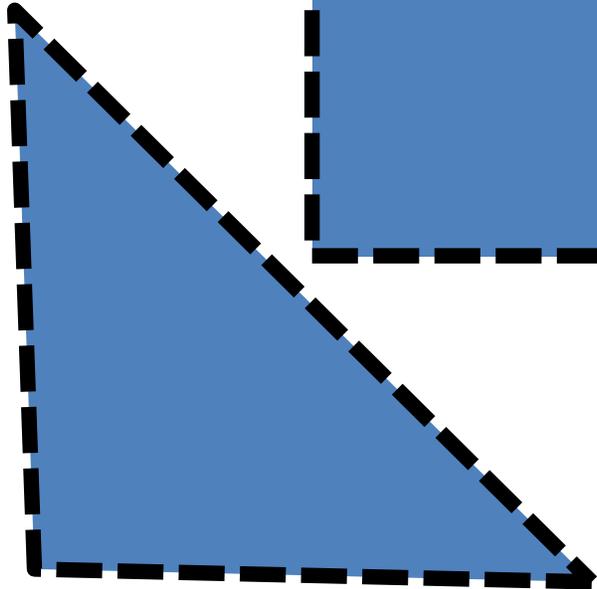
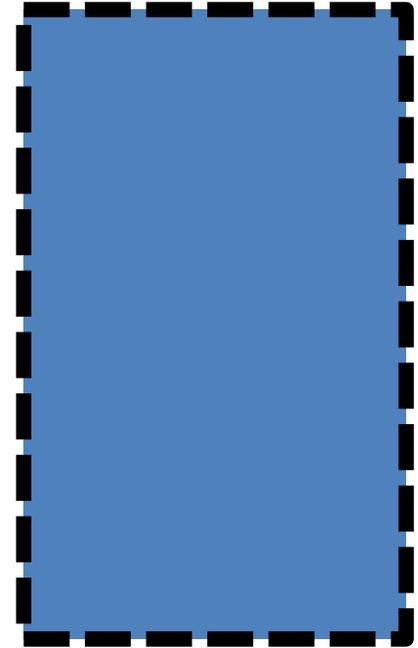
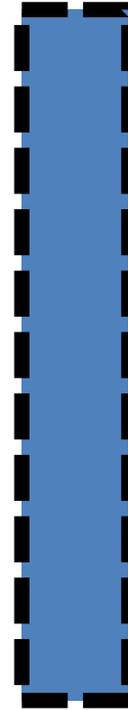
5 Minutes

K.G.5

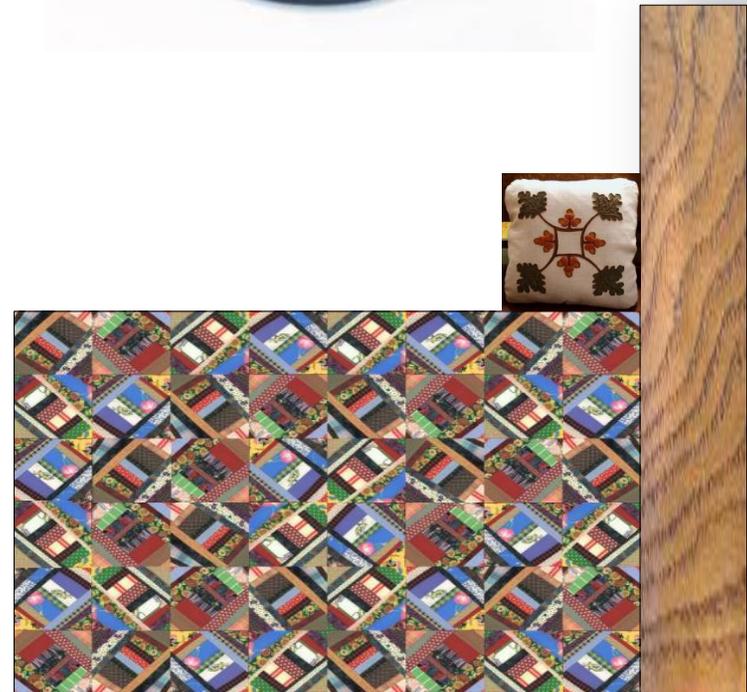
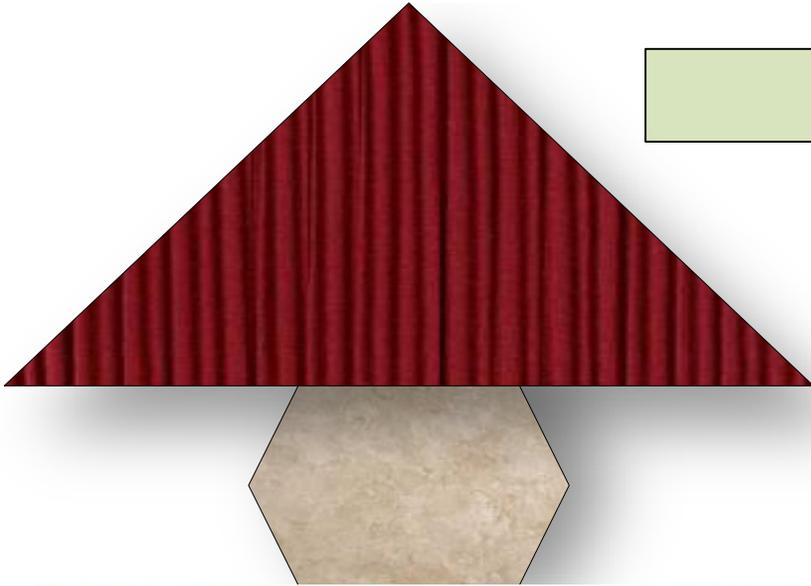
Key Academic Math Vocabulary Card



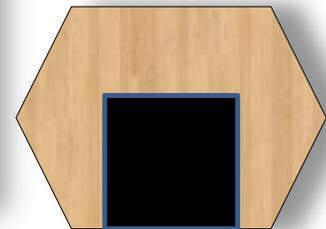
K.G.5 Shapes (cut out)



K.G.5 Bedroom Scene



K.G.5 House Scene





Mathematics Tutoring Session Template

Before You Begin

Common Core Identification

Domain: Geometry

Cluster: Analyze, compare, create, and compose shapes.

Standard 6: Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"

Key Academic Mathematics Vocabulary (3 or fewer)

Notes and Materials

Notes and suggestions for an effective lesson:

- Cut out Making Shapes (K.G.6) prior to the lesson.

Materials you will need:

- Key Academic Mathematics Vocabulary Card (K.G.6)
- Making Shapes (K.G.6)
- Paper
- Pencil
- Pattern Blocks

2 Minutes

LAUNCH—Assess and Provide Background Knowledge

1. Connect to prior learning. Use a "hook" to gain the student's attention.

- Say, "Help me solve these puzzles using pattern blocks. Look at each picture and try to make the pattern block picture with your pattern blocks. The picture is a different size than you blocks, so you will have to try to build next to it."

2. Introduce and review Key Academic Mathematics Vocabulary.

- Say, "Let's look at the Key Academic Mathematics Vocabulary Card (K.G.6). This shows the different shapes we will be making today." Talk about the name of each shape with the student.

INSTRUCT—Provide Explicit, Interactive Instruction

3. State the objective.

Say, "Today, we are going to use small shapes to form a larger shape."

4. Provide explicit step-by-step instructions.

- Say, "We are going to make a rectangle using two small squares." Find two squares. "Now, I am going to put those two shapes together to make a rectangle." Model this for the student. Have the student draw the two shapes together that make a rectangle.



- Say, "Now, let's find two triangles to make a rectangle."
- Only one kind of triangle (right triangle) will make a rectangle. Have the student figure out which ones make a rectangle. Have the student draw the shapes that make a rectangle on his/her paper.



8 Minutes

5. Model.

- Say, "Let's make more shapes by putting shapes together."
- Have the student find the shapes and try to figure out how to put them together to make the new shape. If he/she is struggling, assist by questioning or making suggestions. Continue modeling as above and having the student draw after every turn:

- Use two triangles to make a rectangle.

- Use two squares to make a rectangle.
- Use two smaller triangles to make a triangle.
- Use two triangles to make a square.

6. Check for understanding (work problem with student).

- Model for the student how sometimes you need to rotate the shape to make it into a new shape.

GUIDED PRACTICE—Monitor Student Work

7. Student works problems independently while tutor watches and coaches.

- Have the student find the shapes and try to figure out how to put them together to make the new shape. If he/she is struggling, assist by questioning or making suggestions. Continue modeling as above and having the student draw after every turn:
 - Use a trapezoid and a triangle to make a triangle.
 - Use two trapezoids and six triangles to make hexagon.
 - Use two rectangles to make a square.

ASSESS—Evaluate Student Demonstration

8. Student orally defines at least one Key Academic Mathematics Vocabulary word and skill or concept. / 9. Student works a problem while explaining EVERY step orally.

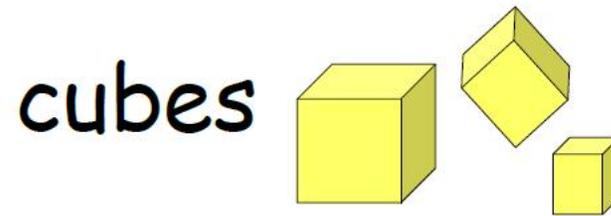
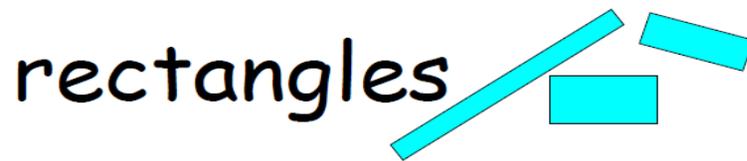
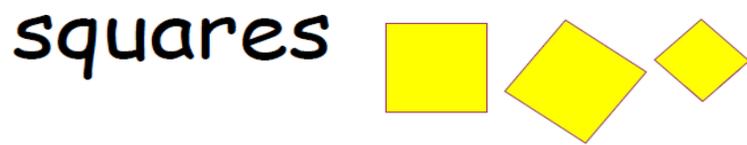
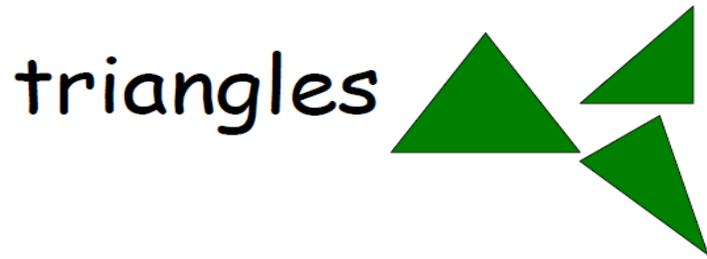
- Ask, “What shape(s) can you use to make a square? Can you make a rectangle? Draw those shapes and explain what you are thinking.”

5 Minutes

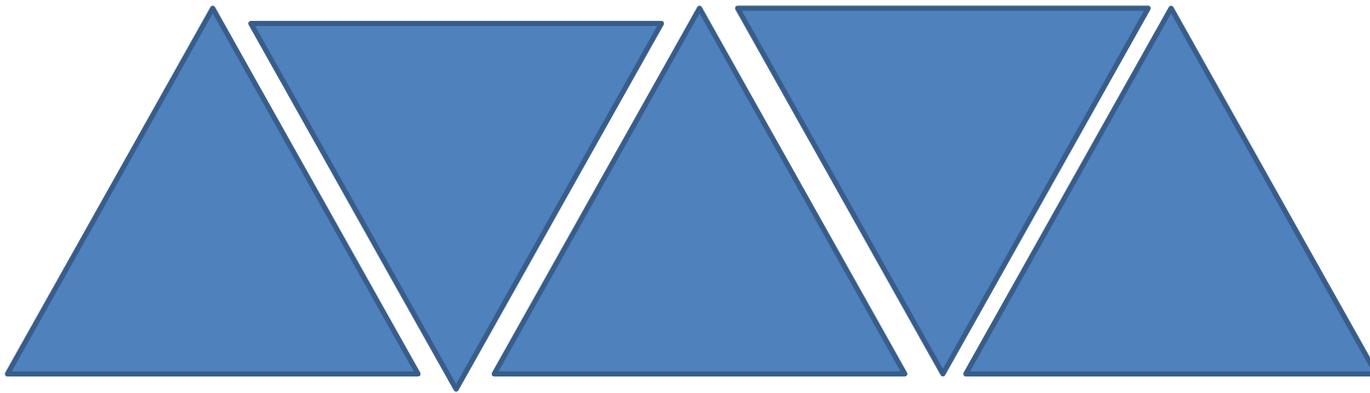
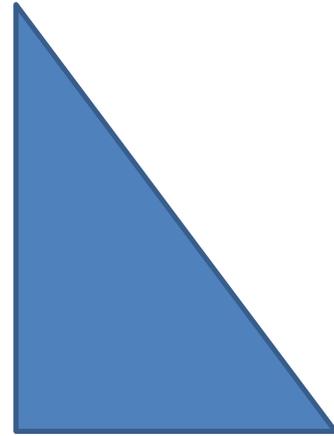
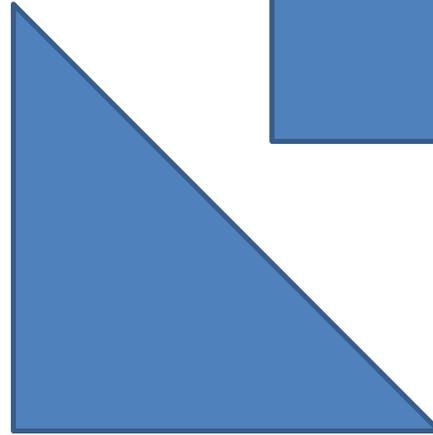
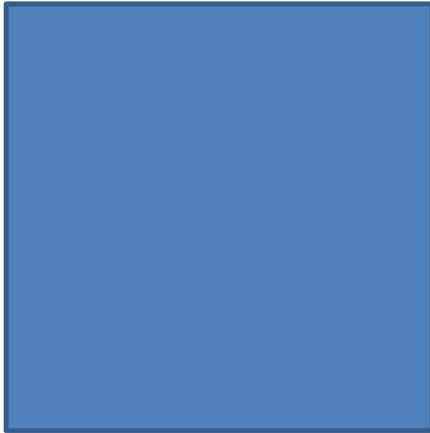
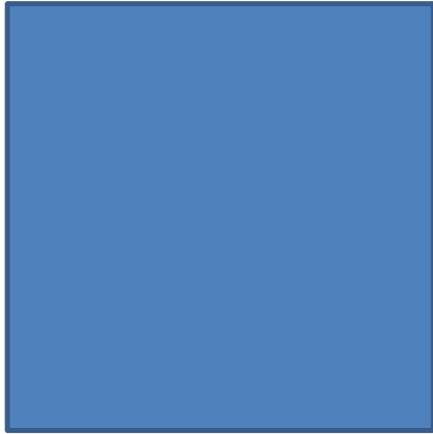
5 Minutes

K.G.1

Key Academic Math Vocabulary Card



K.G.5 Making Shapes (Cut out)



K.G.5 Making Shapes (Cut out)

